



# **STIC Search Report**

**EIC 1700**

**STIC Database Tracking Number: 146874**

**TO: Hoa V Le**  
**Location: REM 9D61**  
**Art Unit : 1752**  
**March 15, 2005**

**Case Serial Number: 10/732956**

**From: Usha Shrestha**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-3519**  
**usha.shrestha@uspto.gov**

## **Search Notes**



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

## SEARCH REQUEST FORM

Scientific and Technical Information Center

1<sup>st</sup> request

Requester's Full Name: HOT VAN LE Examiner #: 60626 Date: 04 March 2005  
 Art Unit: 1752 Phone Number 301 712 72-1332 Serial Number: 10132956  
 Mail Box and Bldg/Room Location: REM 9561 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- (A) ① please search for compounds of the general formula I  
 ② please search for compounds of the general formula II
- (B) ① please search for compounds of the general formula SG-I  
 ② please search for compounds of the general formula SG-II  
 ③ please search for compounds of the general formula SG-III  
 ④ please search for compounds of the general formula SG-IV
- (C) please search for a green sensitive silver halide emulsion (layer) in a photographic material containing both (a) compounds of formulas (1), (2) or I and and (b) formulas SG (I, II, III and/or IV)

Thank you.

## STAFF USE ONLY

Searcher: YJL  
 Searcher Phone #: \_\_\_\_\_  
 Searcher Location: \_\_\_\_\_  
 Date Searcher Picked Up: 3/14/05  
 Date Completed: 3/15/05  
 Searcher Prep & Review Time: 40  
 Clerical Prep Time: 40  
 Online Time: 70

## Type of Search

NA Sequence (#) \_\_\_\_\_  
 AA Sequence (#) \_\_\_\_\_  
 Structure (#) 2  
 Bibliographic \_\_\_\_\_  
 Litigation \_\_\_\_\_  
 Fulltext \_\_\_\_\_  
 Patent Family \_\_\_\_\_  
 Other \_\_\_\_\_

## Vendors and list where applicable

STN 8345:34  
 Dialog \_\_\_\_\_  
 Questel/Orbit \_\_\_\_\_  
 Dr. Link \_\_\_\_\_  
 Lexis/Nexis \_\_\_\_\_  
 Sequence Systems \_\_\_\_\_  
 WWW/Internet \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

10/732,956

- 66 -

**WHAT IS CLAIMED IS:**

1. A silver halide photographic element comprising a support bearing a cyan dye image forming unit comprised of at least one red sensitive silver halide emulsion, a magenta dye image forming unit comprised of at least one green sensitive silver halide emulsion, and a yellow dye image forming unit comprised of at least one blue sensitive silver halide emulsion; wherein the at least one green sensitive silver halide emulsion comprises two absorptance peaks, the first peak being between 515 and 540 nm (short wavelength peak) and the second peak being between 565 and 590 nm, (long wavelength peak) and wherein

(a) the ratio of the absorptance peak value of the short wavelength peak to the absorptance peak value of the long wavelength peak is from 0.65 to 1.55,

(b) the absorptance minimum between the two absorptance peaks is between 530 and 560 nm,

(c) the ratio of the absorptance value at the absorptance minimum to that of the smaller absorptance peak is 0.86 or less,

(d) the ratio of the absorptance at 490 nm to that of the highest absorptance peak is 0.60 or less.

2. The silver halide photographic element of claim 1 wherein the short wave length peak is between 515 and 535 and the long wavelength peak is between 565 and 585.

3. The silver halide photographic element of claim 1 wherein the short wavelength peak is between 515 and 530 and the long wavelength peak is between 565 and 580.

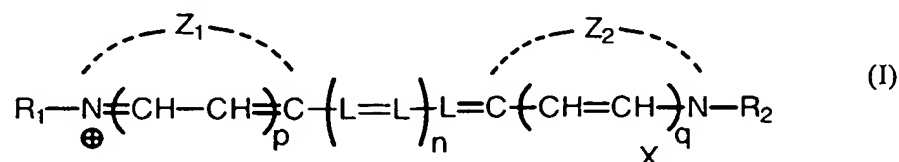
4. The silver halide photographic element of claim 1 wherein the ratio of the absorptance peak value of the short wavelength peak to the absorptance peak value of the long wavelength peak is from 0.75 to 1.45.



5. The silver halide photographic element of claim 1 wherein the absorptance minimum between the two absorptance peaks is between 535 and 555 nm.

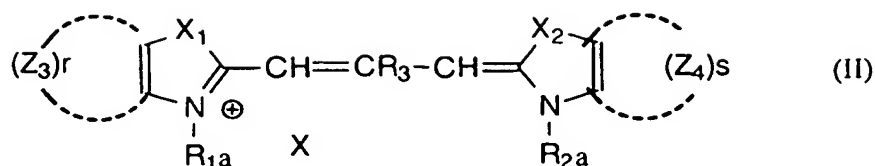
6. The silver halide photographic element of claim 1 wherein the absorptance minimum between the two absorptance peaks is between 540 and 550 nm.

7. The silver halide photographic element of claim 1 wherein the at least one green sensitive emulsion has been sensitized with at least one green sensitizing dye represented by formula (I):



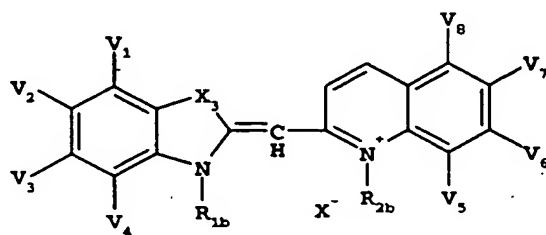
wherein each of R<sub>1</sub> and R<sub>2</sub> independently represents a substituted or unsubstituted alkyl group or substituted or unsubstituted aryl group; each of Z<sub>1</sub> and Z<sub>2</sub> independently represents the atoms necessary to complete a 5- or 6-membered heterocyclic ring system; each L is a substituted or unsubstituted methine group; each of p, q, and n is independently 0 or 1; and X is a counterion as necessary to balance the charge.

8. The silver halide photographic element of claim 1 wherein the at least one green sensitive emulsion has been sensitized with at least one green sensitizing dye represented by formula (II):



wherein each of  $R_{1a}$  and  $R_{2a}$  independently represents a substituted or unsubstituted alkyl group or substituted or unsubstituted aryl group; each of  $r$  and  $s$  is independently 0 or 1; each of  $Z_3$  and  $Z_4$  independently represents the atoms necessary to complete a fused benzene, naphthalene, pyridine, or pyrazine ring, which can be further substituted;  $R_3$  is a substituted or unsubstituted alkyl group, or a substituted or unsubstituted aryl group;  $X_1$  and  $X_2$  can each individually be O, S, or Se, , N- $R_4$ , where  $R_4$  is a substituted or unsubstituted alkyl group, or substituted or unsubstituted aryl group, with the proviso that  $X_1$  and  $X_2$  are not both S or Se; and when  $r$  or  $s$  is 0, the 5-membered ring containing  $X_1$  or  $X_2$ , respectively, may be further substituted at the 4 and/or 5 position and  $X$  is a counterion as necessary to balance the charge.

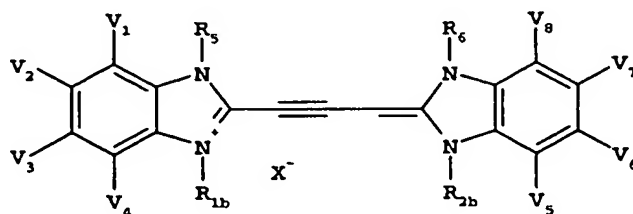
9. The silver halide photographic element of claim 1 wherein the at least one green sensitive emulsion has been sensitized with at least one green sensitizing dye represented by formula SG-I, SG-II, SG-III, or SG-IV:



SG-I

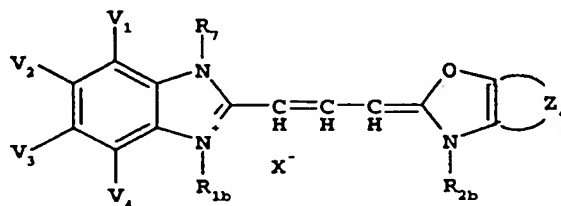
wherein each of  $R_{1b}$  and  $R_{2b}$  independently represents a substituted or unsubstituted alkyl group or substituted or unsubstituted aryl group;  $X_3$  is S or Se, and each of  $V_1$  to  $V_8$  independently represents hydrogen, a substituted or unsubstituted alkyl group, a substituted or unsubstituted aromatic group, a halogen atom, a cyano group, a sulfamyl, an alkoxy carbonyl, an acylamino group, a

carbamoyl group, a carboxy group, or a substituted or unsubstituted alkoxy group and adjacent pairs of substituents  $V_1$  to  $V_7$  may be joined to form a fused carbocyclic, heterocyclic, aromatic, or heteroaromatic ring, which may be substituted and X is a counterion as necessary to balance the charge;



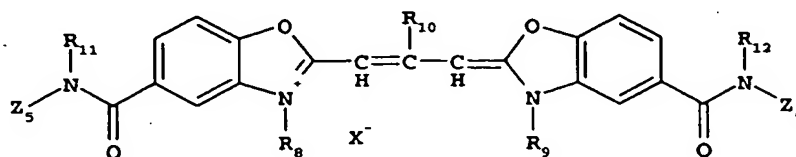
SG-II

wherein  $R_{1b}$ ,  $R_{2b}$ ,  $V_1$ - $V_8$  and X have the same meaning as in structure SG-I; and each of  $R_5$  and  $R_6$  independently represents a substituted or unsubstituted alkyl group or substituted or unsubstituted aryl group;



SG-III

wherein  $R_{1b}$ ,  $R_{2b}$ ,  $V_1$ - $V_4$  and X, have the same meaning as in formula SG-I;  $Z_4$  represents the atoms necessary to complete a fused benzene, naphthalene, pyridine, or pyrazine ring, which can be further substituted; and  $R_7$  represents a substituted or unsubstituted alkyl group, or substituted or unsubstituted aryl group;

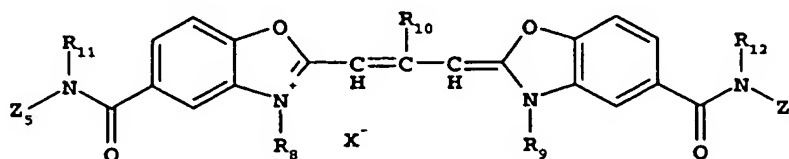


SG-IV

wherein  $R_{10}$  is hydrogen or a substituted or unsubstituted aryl group or a substituted or unsubstituted alkyl group;  $R_8$  and  $R_9$  are both independently

substituted or unsubstituted alkyl groups;  $R_{11}$  and  $R_{12}$  are independently hydrogen or a substituted or unsubstituted alkyl group;  $Z_5$  and  $Z_6$  each individually represents a substituted or unsubstituted aromatic group and  $X$  is one or more ions needed to balance the charge on the molecule.

10. The silver halide photographic element of claim 9 wherein the at least one green sensitive emulsion has been sensitized with at least one green sensitizing dye represented by formula SG-IV;



wherein  $R_{10}$  is hydrogen or a substituted or unsubstituted aryl group or a substituted or unsubstituted alkyl group;  $R_8$  and  $R_9$  are both independently substituted or unsubstituted alkyl groups;  $R_{11}$  and  $R_{12}$  are independently hydrogen or a substituted or unsubstituted alkyl group;  $Z_5$  and  $Z_6$  each individually represents a substituted or unsubstituted aromatic group and  $X$  is one or more ions needed to balance the charge on the molecule..

11. The silver halide photographic element of claim 1 wherein the short wavelength dye is a J-aggregate dye.

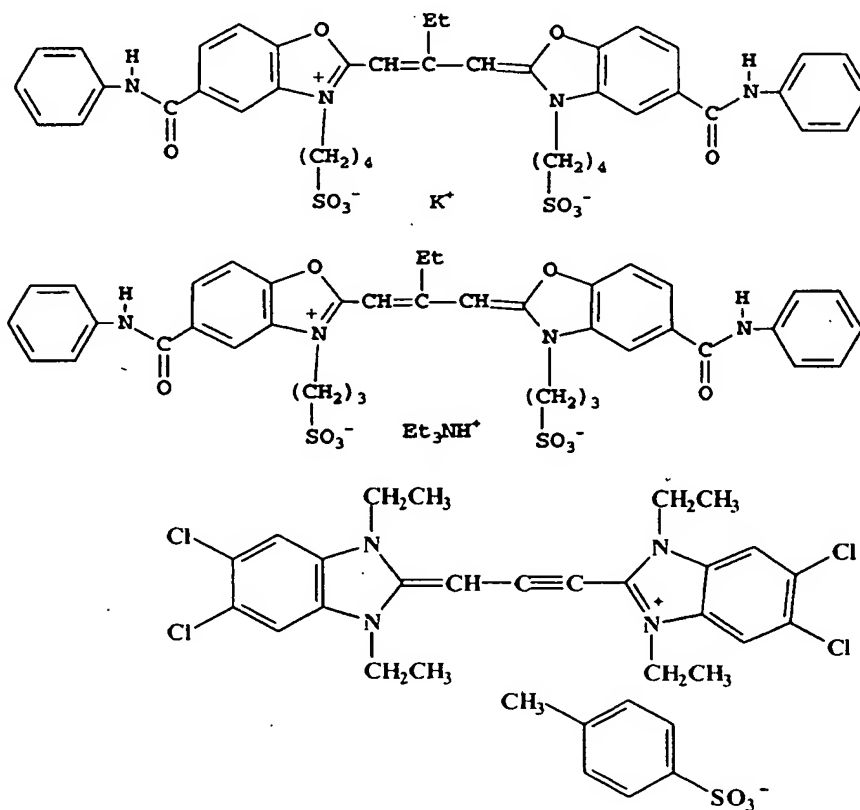
12. The silver halide photographic element of claim 7 wherein the at least one green sensitizing dye is a J-aggregate dye.

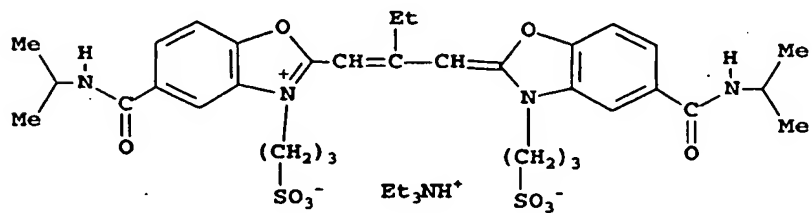
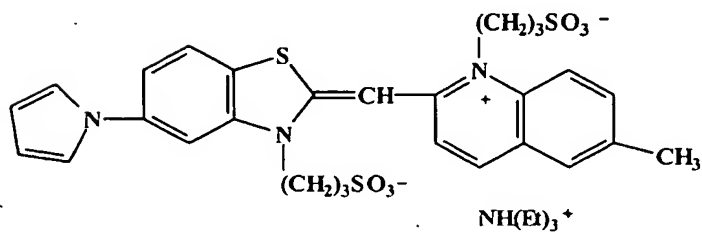
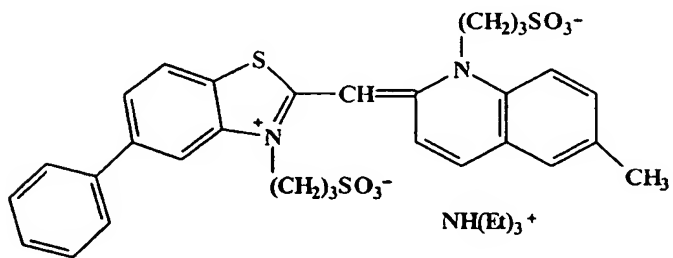
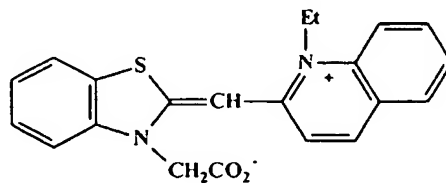
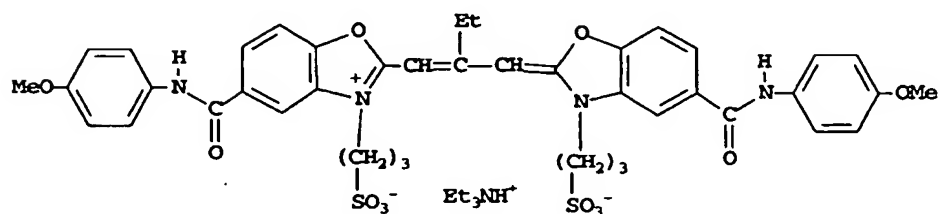
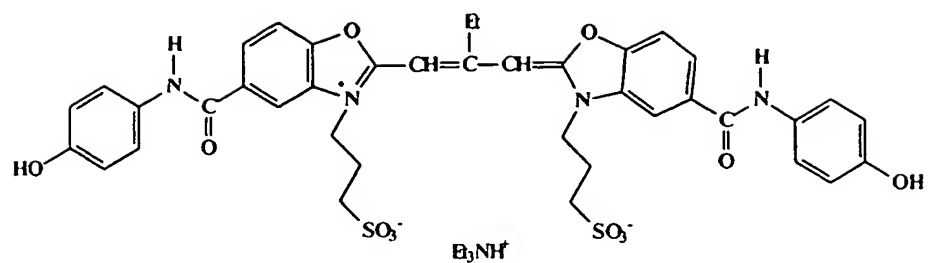
13. The silver halide photographic element of claim 8 wherein the at least one green sensitizing dye is a J-aggregate dye.

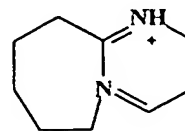
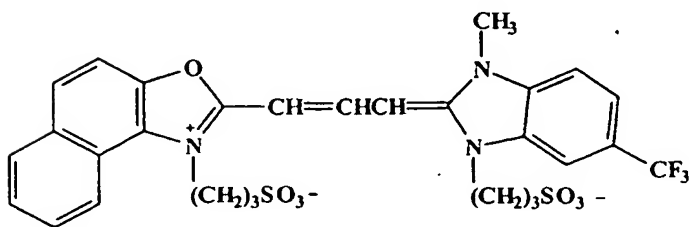
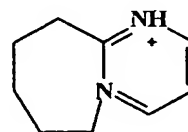
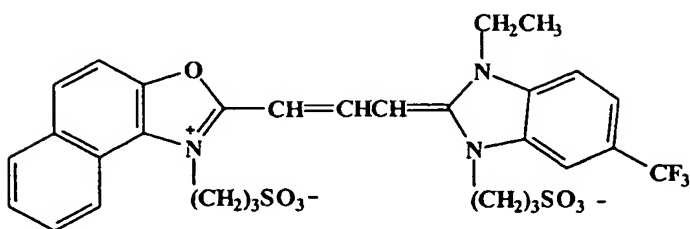
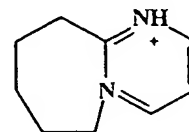
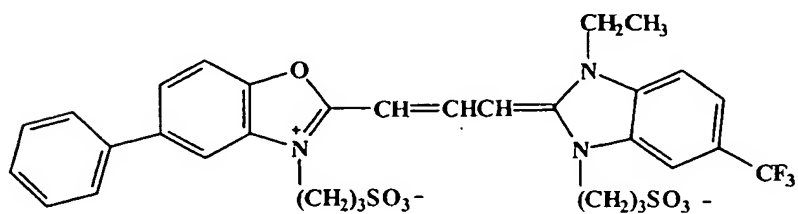
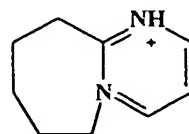
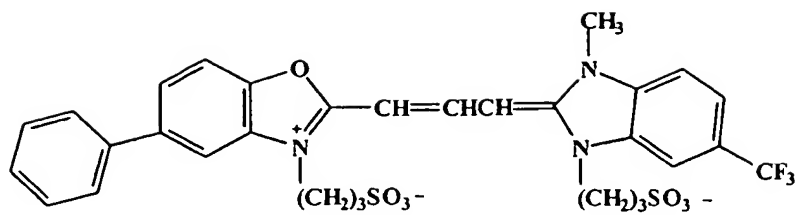
14. The silver halide photographic element of claim 9 wherein the at least one green sensitizing dye is a J-aggregate dye.

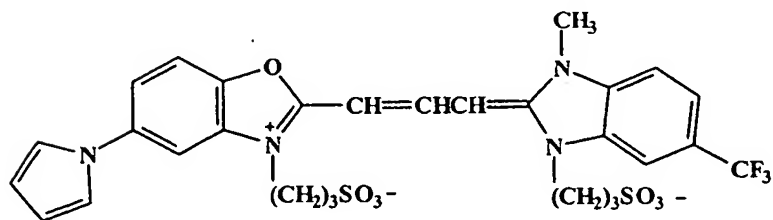
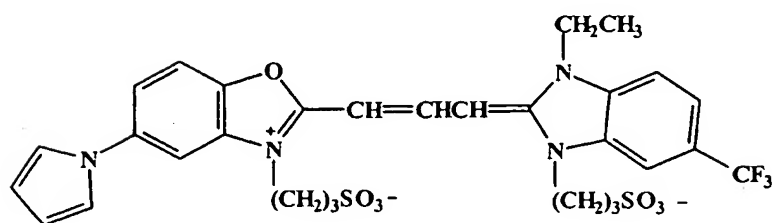
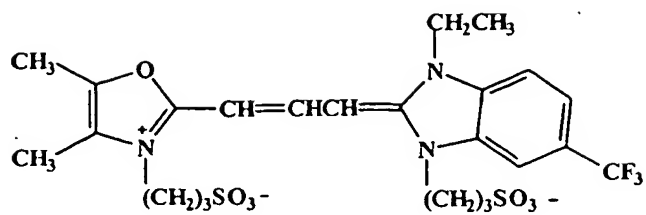
15. The silver halide photographic element of claim 10 wherein the at least one green sensitizing dye is a J-aggregate dye.

16. The silver halide photographic element of claim 1 wherein the at least one green sensitive emulsion has been sensitized with at least one of the following green sensitizing dyes:

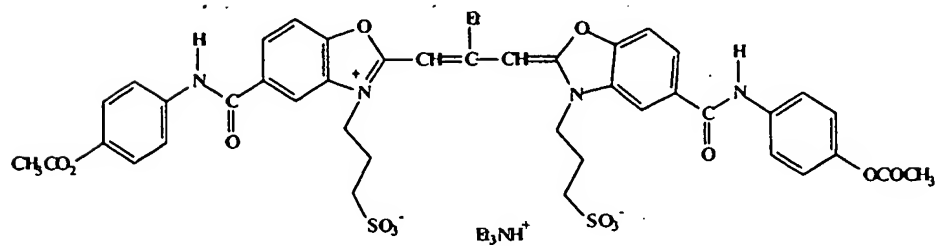








or







## UNITED STATES PATENT AND TRADEMARK OFFICE

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## \*BIBDATASHEET\*

CONFIRMATION NO. 9217

Bib Data Sheet

SERIAL NUMBER 10/732,956	FILING DATE 12/11/2003  RULE	CLASS 430	GROUP ART UNIT 1752	ATTORNEY DOCKET NO. 82301SMR
<b>APPLICANTS</b>  David E. Fenton, Fairport, NY;  Lois A. Buitano, Potomac, MD; Steven G. Link, Rochester, NY; Sharon G. Johnston, Rochester, NY; David B. Moorehouse, Rochester, NY;				
** CONTINUING DATA *****				
** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 03/16/2004				
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Verified and Acknowledged	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Examiner's Signature _____ Initials _____	STATE OR  COUNTRY NY	SHEETS  DRAWING	TOTAL  CLAIMS 16
INDEPENDENT  CLAIMS 1				
<b>ADDRESS</b> Paul A. Leipold Patent Legal Staff Eastman Kodak Company 343 State Street Rochester, NY 14650-2201				
<b>TITLE</b> Photographic film element containing an emulsion with dual peak green responsivity				
FILING FEE	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time )	

=> fil reg

FILE 'REGISTRY' ENTERED AT 11:04:05 ON 15 MAR 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

=> d his

FILE 'HCAPLUS' ENTERED AT 08:43:45 ON 15 MAR 2005

L1 520 S FENTON D?/AU  
L2 19 S BUITANO L?/AU  
L3 121 S LINK S?/AU  
L4 707 S JOHNSTON S?/AU  
L5 0 S MOOREHOUSE D?/AU  
L6 0 S L1 AND L2 AND L3 AND L4 AND L5  
L7 0 S L1 AND L2  
L8 0 S L1 AND L5

FILE 'LREGISTRY' ENTERED AT 08:45:39 ON 15 MAR 2005

L9 STR  
L10 STR  
L11 STR L9

FILE 'REGISTRY' ENTERED AT 09:17:27 ON 15 MAR 2005

L12 15 S L11  
L13 SCR 1603  
L14 SCR 1607  
L15 SCR 1839  
L16 50 S L11 AND L13 AND L14 AND L15  
L17 50 S L11 AND L13 AND L15  
L18 SCR 2040  
L19 50 S L11 AND L13 AND L14 AND L15 AND L18  
L20 73959 S L11 AND L13 AND L14 AND L15 AND L18 FUL  
SAV L20 LE956/A  
L21 STR L10  
L22 50 S L21 SAM SUB=L20  
L23 19371 S L21 FUL SUB=L20  
L24 54588 S L20 NOT L23

FILE 'HCAPLUS' ENTERED AT 10:43:13 ON 15 MAR 2005

L25 19025 S L24  
L26 6885 S L23  
L27 2228 S L25 AND L26  
L28 1565 S L27 AND PHOTO?/SC  
L29 73 S L28 AND GREEN?(A) SENSIT?

FILE 'REGISTRY' ENTERED AT 11:03:39 ON 15 MAR 2005

FILE 'REGISTRY' ENTERED AT 11:04:05 ON 15 MAR 2005

=> d que 125

L11 STR

G1~Hy~Ak~Hy~G1  
1 2 3 4 5

VAR G1=AK/CB

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 2

ECOUNT IS M1 N AT 4

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L13 SCR 1603

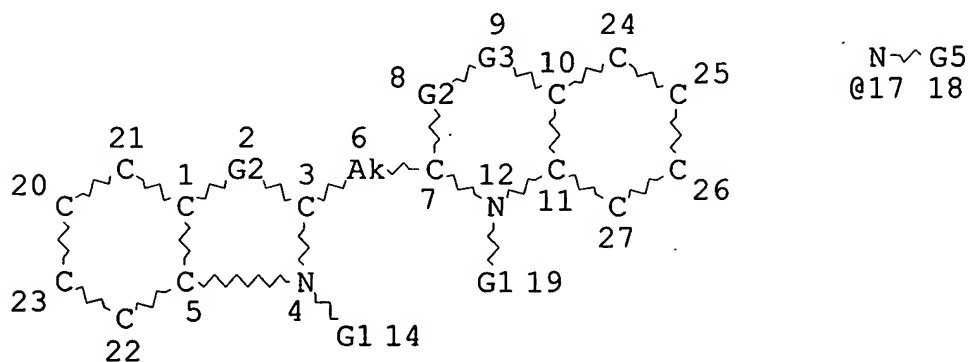
L14 SCR 1607

L15 SCR 1839

L18 SCR 2040

L20 73959 SEA FILE=REGISTRY SSS FUL L11 AND L13 AND L14 AND L15  
AND L18

L21 STR



VAR G1=AK/CB

VAR G2=O/S/SE/17

REP G3=(0-1) C  
VAR G5=AK/CB  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M1-X5 C AT 6

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE  
L23 19371 SEA FILE=REGISTRY SUB=L20 SSS FUL L21  
L24 54588 SEA FILE=REGISTRY ABB=ON PLU=ON L20 NOT L23  
L25 19025 SEA FILE=HCAPLUS ABB=ON PLU=ON L24

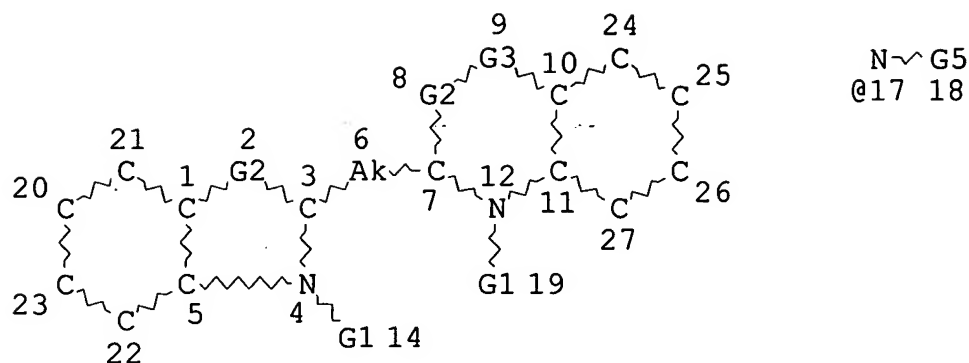
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L11 STR

G1 $\wedge$ Hy $\wedge$ Ak $\wedge$ Hy $\wedge$ G1  
1 2 3 4 5

VAR G1=AK/CB  
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DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M1 N AT 2  
ECOUNT IS M1 N AT 4

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
L13 SCR 1603  
L14 SCR 1607  
L15 SCR 1839  
L18 SCR 2040  
L20 73959 SEA FILE=REGISTRY SSS FUL L11 AND L13 AND L14 AND L15  
AND L18  
L21 STR



USHA SHRESTHA                      REM 4B28

TITLE: Silver halide color photography film with high sensitivity, particulate, and suppressed changes in photographic properties by process variation

INVENTOR(S): Funakubo, Takeshi; Takahisa, Koji

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 107 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2004279463	A2	20041007	JP 2003-66918	2003 0312
				2003 0312

PRIORITY APPLN. INFO.: JP 2003-66918

AB The photog. film contains a support having thereon  $\geq 1$  red-sensitive Ag halide emulsion layers containing cyan couplers,  $\geq 1$  **green-sensitive** Ag halide emulsion layers containing magenta couplers,  $\geq 1$  blue-sensitive Ag halide emulsion layers containing yellow couplers, and  $\geq 1$  nonphotosensitive layers, wherein (1)  $\geq 1$  of the nonphotosensitive layers contain  $\geq 1$  compds. which release (precursors of) development suppressors by reaction with oxides of development main agents and optionally colloidal Ag and will not form color after the release and (2)  $\geq 1$  of the Ag halide emulsion layers contain photosensitive Ag halide emulsions containing  $\geq 1$  tabular grains of (i) Ag bromide iodide or Ag bromide chloride iodide having (111) face as the main plane, (ii) equivalent circle diameter  $\geq 1.0 \mu\text{m}$  and grain thickness  $\leq 0.15 \mu\text{m}$ , and (iii) having  $\leq 0.1\text{-}\mu\text{m}$  thick pattern-free cores of Ag bromide iodide and  $\geq 10$  dislocation lines. Preferably,  $\geq 1$  of the photosensitive Ag halide emulsion layers contain emulsions containing Ag bromide iodide tabular grains having epitaxial projections.

IT 23216-66-2 23216-67-3 55425-23-5  
65293-95-0 90895-32-2 98835-00-8  
109775-22-6 113436-96-7 128140-11-4

166444-20-8 189702-75-8 224314-59-4

352674-49-8 743370-45-8

(sensitizing dye; silver halide color photog. film with high sensitivity, particulate, and process allowance)

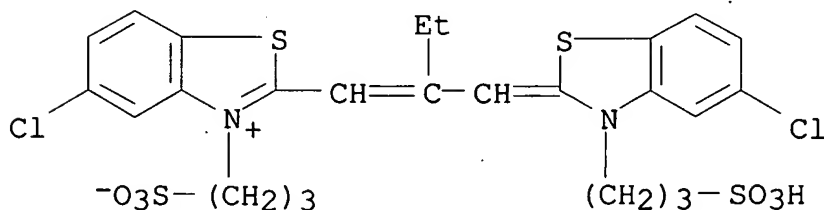
RN 23216-66-2 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 23568-98-1

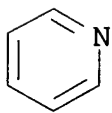
CMF C25 H26 Cl2 N2 O6 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

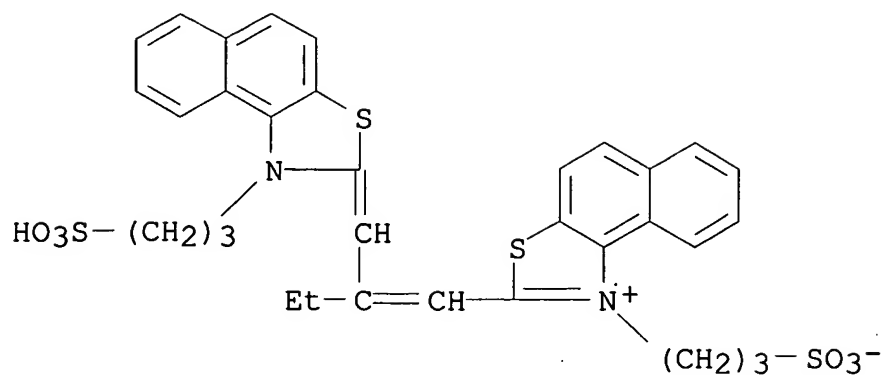
CM 1

CRN 4622-66-6

USHA SHRESTHA

REM 4B28

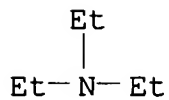
CMF C33 H32 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 55425-23-5 HCAPLUS

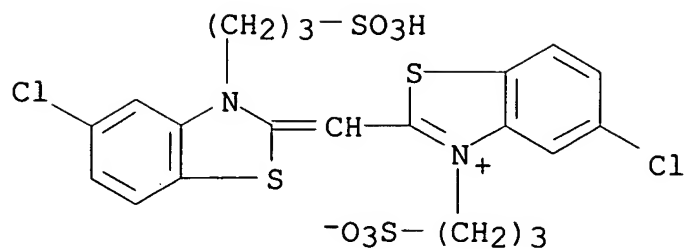
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55425-22-4

CMF C21 H20 Cl2 N2 O6 S4

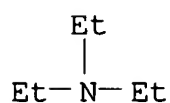




CM 2

CRN 121-44-8

CMF C6 H15 N



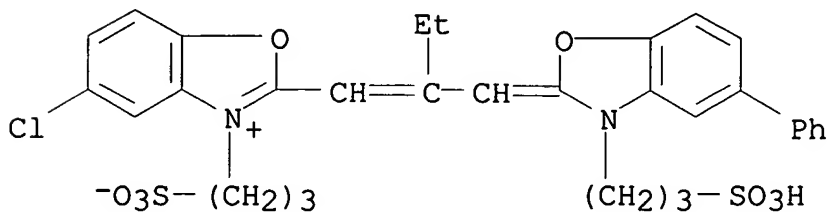
RN 65293-95-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

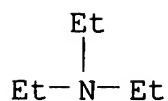
CRN 65293-94-9

CMF C31 H31 Cl N2 O8 S2



CM 2

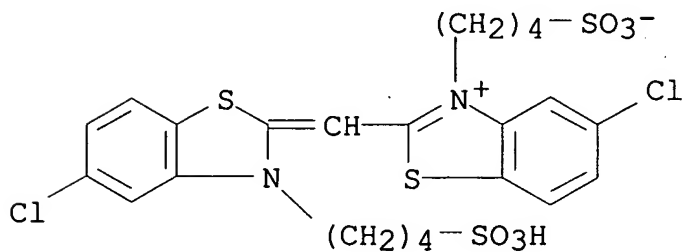
CRN 121-44-8  
CMF C6 H15 N



RN 90895-32-2 HCAPLUS  
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolyliidene]methyl]-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

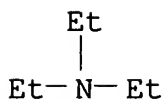
CM 1

CRN 90895-31-1  
CMF C23 H24 Cl2 N2 O6 S4



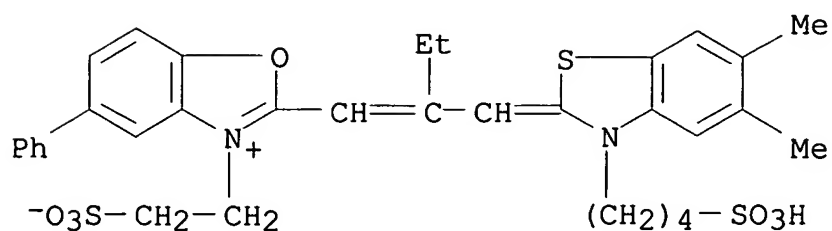
CM 2

CRN 121-44-8  
CMF C6 H15 N



RN 98835-00-8 HCAPLUS  
CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolyliidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-,

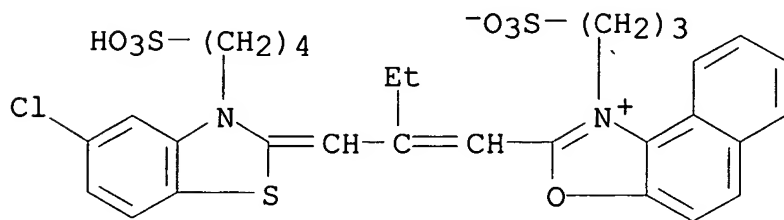
inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 109775-22-6 HCAPLUS

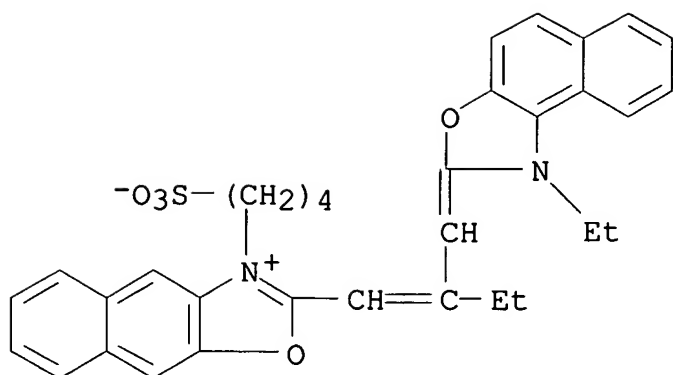
CN Naphth[1,2-d]oxazolium, 2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 113436-96-7 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



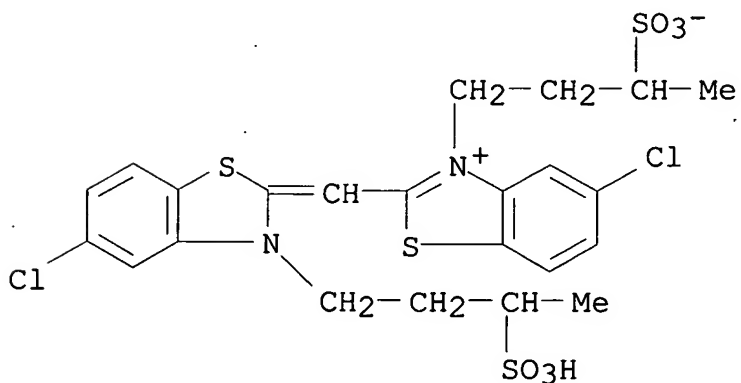
RN 128140-11-4 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 128140-10-3

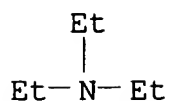
CMF C23 H24 Cl2 N2 O6 S4



CM 2

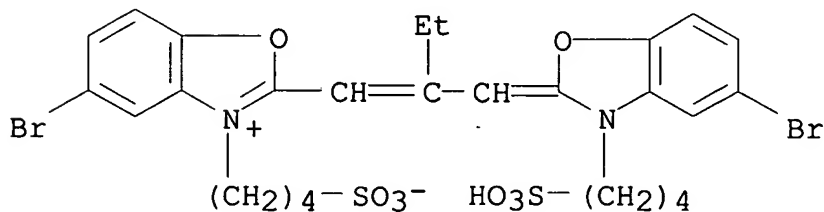
CRN 121-44-8

CMF C6 H15 N



RN 166444-20-8 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

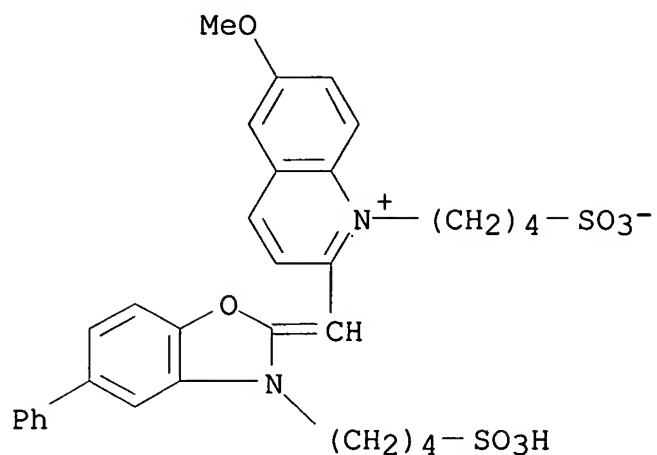
RN 189702-75-8 HCAPLUS

CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 189702-74-7

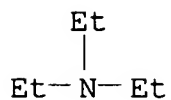
CMF C32 H34 N2 O8 S2



CM 2

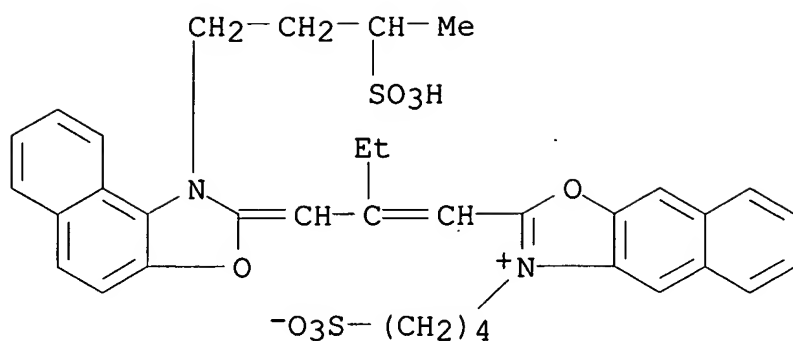
CRN 121-44-8

CMF C6 H15 N



RN 224314-59-4 HCAPLUS

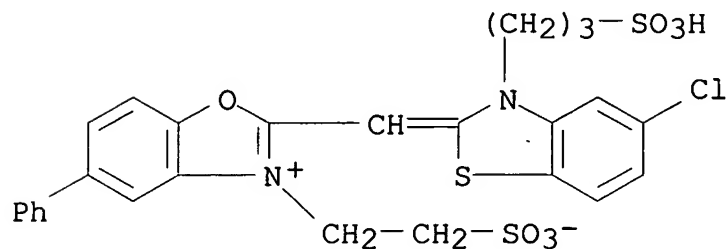
CN Naphth[2,3-d]oxazolium, 3-(4-sulfobutyl)-2-[2-[[1-(3-sulfobutyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

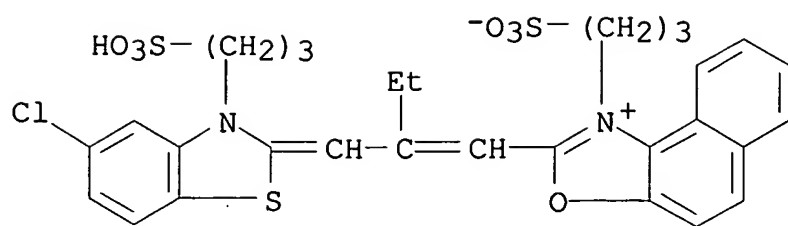
RN 352674-49-8 HCAPLUS

CN Benzoxazolium, 2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 743370-45-8 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IT 768402-87-5

(silver halide color photog. film with high sensitivity,  
particulate, and process allowance)

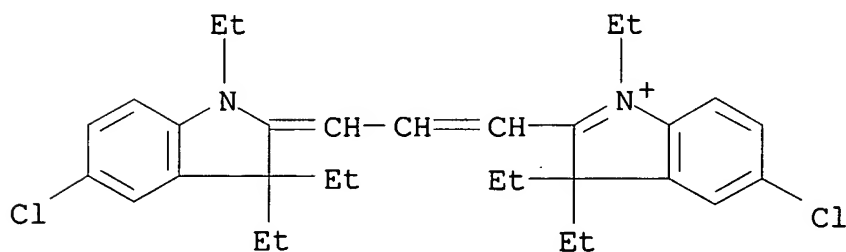
RN 768402-87-5 HCAPLUS

CN 3H-Indolium, 5-chloro-2-[3-(5-chloro-1,3,3-triethyl-1,3-dihydro-2H-  
indol-2-ylidene)-1-propenyl]-1,3,3-triethyl-, ethyl sulfate (9CI)  
(CA INDEX NAME)

CM 1

CRN 768402-86-4

CMF C31 H39 Cl2 N2



CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO<sub>3</sub><sup>-</sup>

IC ICM G03C001-035

ICS G03C001-43; G03C007-18; G03C007-20; G03C007-305

USHA SHRESTHA

REM 4B28



CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)

IT 23216-66-2 23216-67-3 55425-23-5  
65293-95-0 90895-32-2 98835-00-8  
109775-22-6 113436-96-7 128140-11-4  
166444-20-8 189702-75-8 224314-59-4  
352674-49-8 743370-45-8

(sensitizing dye; silver halide color photog. film with high  
sensitivity, particulate, and process allowance)

IT 78-42-2, Tri(2-ethylhexyl phosphate 84-74-2, Dibutyl phthalate  
119-47-1 903-19-5 1330-78-5, Tricresyl phosphate 3147-76-0  
3864-99-1 4595-26-0 9003-32-1, Poly(ethyl acrylate)  
10191-41-0 25086-15-1 28889-54-5 33901-81-4 36437-37-3  
36753-13-6 53953-04-1 57583-54-7 63320-47-8 64137-48-0  
64137-49-1 66710-66-5 70950-45-7 76037-75-7 76379-53-8  
86893-76-7 92771-56-7 92991-05-4 97390-52-8 98835-90-6  
104166-82-7 109625-50-5 110011-21-7 111244-14-5  
111631-51-7 111631-54-0 115625-86-0 120542-18-9  
142086-32-6 146883-80-9 148398-08-7 150307-10-1  
151918-31-9, Silver bromide iodide (AgBr0.99I0.01) 168973-45-3  
172903-19-4 178217-98-6 288849-50-3 338947-92-5  
400611-61-2 457892-98-7 615285-44-4 **768402-87-5**  
768402-88-6

(silver halide color photog. film with high sensitivity,  
particulate, and process allowance)

L29 ANSWER 2 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:353033 HCAPLUS

DOCUMENT NUMBER: 140:383050

TITLE: Color reversal photographic material with  
improved color reproduction

INVENTOR(S): Maeno, Yutaka; Shuto, Sadanobu; Kakinuma,  
Akihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 50 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2004081927	A1	20040429	US 2003-682525	

USHA SHRESTHA REM 4B28

2003  
1010

US 6824968                      B2      20041130 /  
JP 2004151706                  A2      20040527      JP 2003-352716

2003  
1010

PRIORITY APPLN. INFO.:                      JP 2002-299509      A

2002  
1011

AB    Color reversal photog. material is described that has superior skin color reproduction and has improved adaptability for various light sources and color temperature dependency of light sources..

Thus,

the color reversal photog. material comprises  $\geq 1$  interimage effect imparting layer (a) and  $\geq 1$  interimage effect imparting layer (b) in addition to the blue-, green- and red sensitive emulsion layers. When the photog. material is exposed to light of a "skin color" and is then developed a ratio of the chroma C\*70 at a brightness L\* = 70 represented by CIE Lab color system to the chroma C\*50 at a brightness L\* = 50, C\*70 /C\*50 , is 0.7 or more. The interimage effect imparting layers have spectral distribution different than that of a main blue-, green- and red sensitive emulsion layers. Thus, the interimage effect layer a contains a short-wavelength **green-sensitive** silver halide emulsion having a weight-averaged wavelength of a spectral sensitivity distribution of 500-560 nm and the interimage effect imparting layer b contains a red-sensitive silver halide emulsion having a weight-averaged wavelength of a spectral sensitivity distribution of 580-700 nm.

IT    **65293-95-0 94143-42-7 98835-00-8**  
**138450-96-1 156861-51-7 222184-90-9**  
**683789-17-5**

(color reversal photog. material with improved skin color reproduction containing interimage effect imparting layers having spectral distribution different than that of main color emulsion layers)

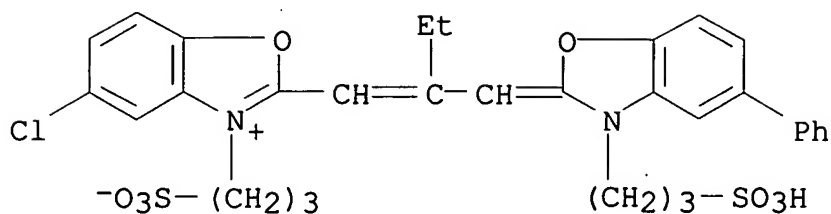
RN    65293-95-0    HCAPLUS

CN    Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM    1

CRN 65293-94-9

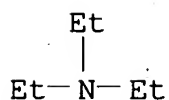
CMF C31 H31 Cl N2 O8 S2



CM 2

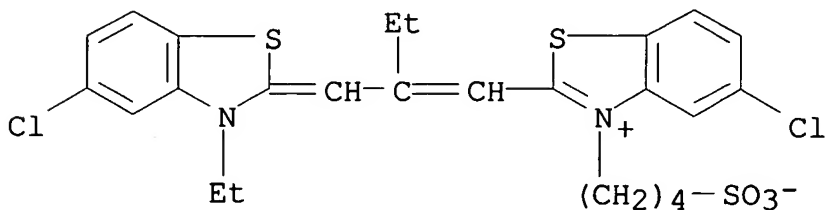
CRN 121-44-8

CMF C6 H15 N



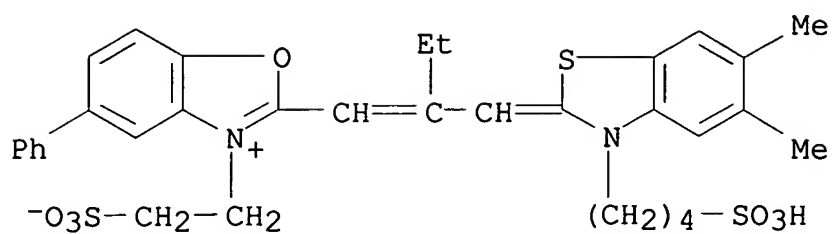
RN 94143-42-7 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolyliidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 98835-00-8 HCAPLUS

CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolyliidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

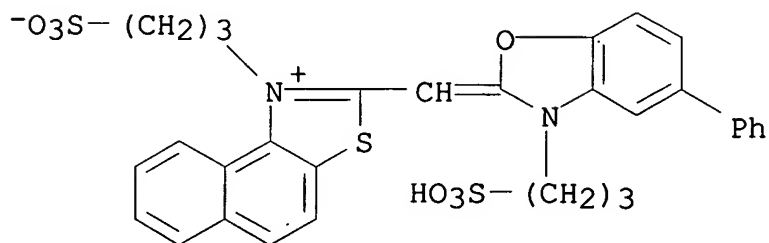
RN 138450-96-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 138450-95-0

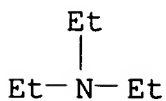
CMF C31 H28 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N

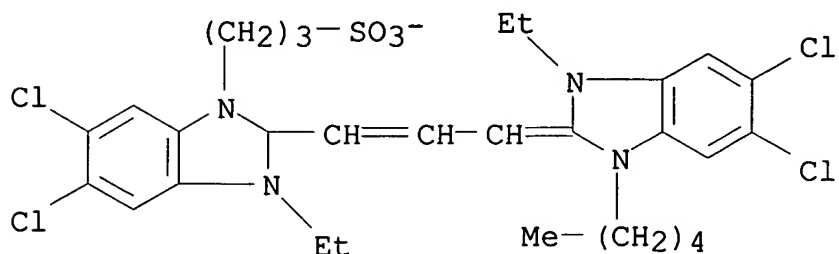


USHA SHRESTHA

REM 4B28

RN 156861-51-7 HCAPLUS

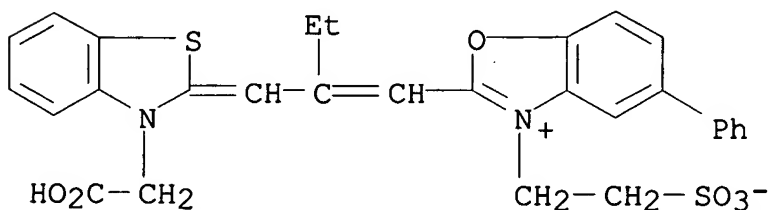
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1-ethyl-1,3-dihydro-3-pentyl-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

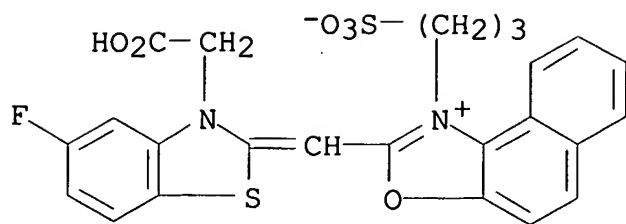
RN 222184-90-9 HCAPLUS

CN Benzoxazolium, 2-[2-[[3-(carboxymethyl)-2(3H)-benzothiazolylydene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 683789-17-5 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[[3-(carboxymethyl)-5-fluoro-2(3H)-benzothiazolylydene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 68392-94-9 92771-57-8 161710-77-6  
189702-74-7 252852-82-7 331229-71-1  
371759-46-5

(interimage effect imparting layer; color reversal photog.  
material with improved skin color reproduction containing  
interimage

effect imparting layers having spectral distribution different  
than that of main color emulsion layers)

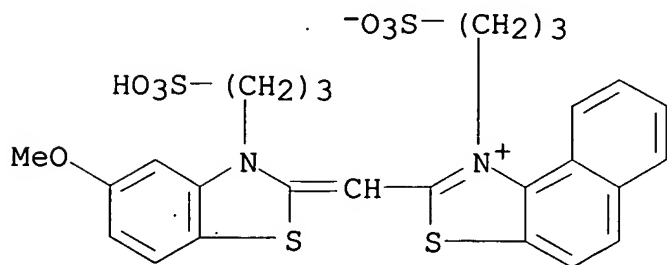
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-  
benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd.  
with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

CMF C26 H26 N2 O7 S4



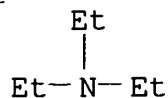
CM 2

USHA SHRESTHA

REM 4B28

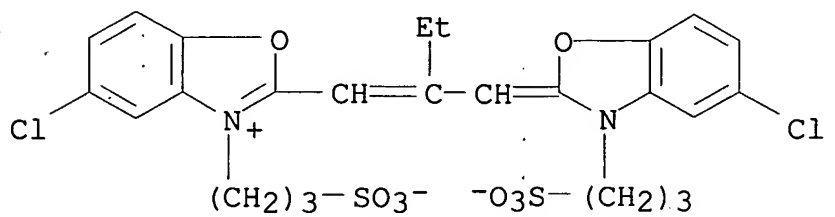
CRN 121-44-8

CMF C6 H15 N



RN 92771-57-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, ion(1-) (9CI) (CA INDEX NAME)



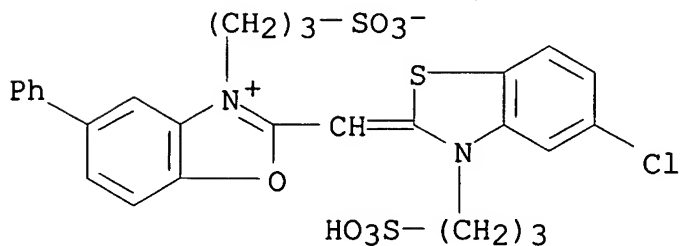
RN 161710-77-6 HCAPLUS

CN Benzothiazolium, 2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 161710-76-5

CMF C27 H25 Cl N2 O7 S3



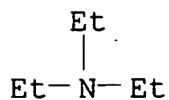
USHA SHRESTHA

REM 4B28

CM 2

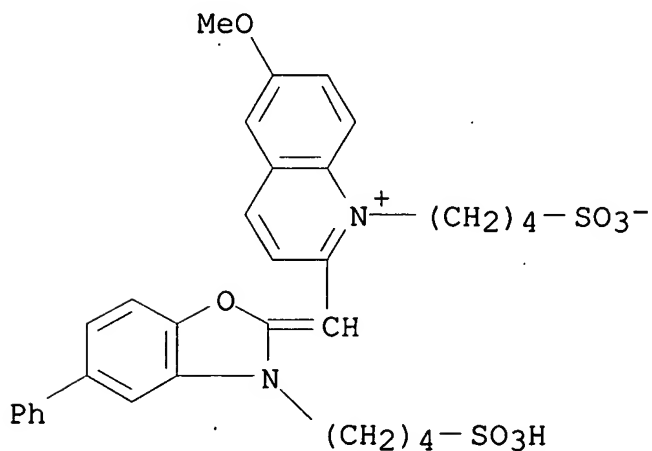
CRN 121-44-8

CMF C6 H15 N



RN 189702-74-7 HCAPLUS

CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 252852-82-7 HCAPLUS

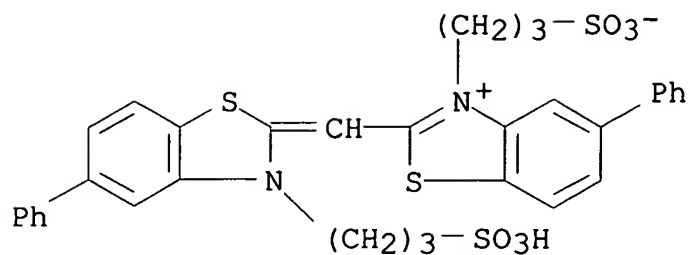
CN Benzothiazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 169324-94-1

CMF C33 H30 N2 O6 S4

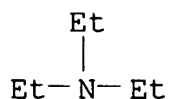




CM 2

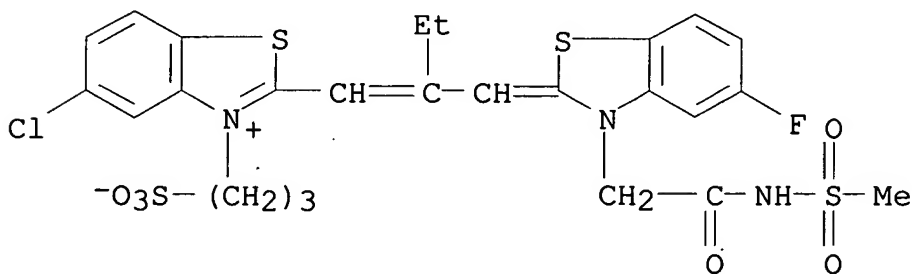
CRN 121-44-8

CMF C6 H15 N



RN 331229-71-1 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-fluoro-3-[2-  
[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-  
benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner  
salt (9CI) (CA INDEX NAME)



RN 371759-46-5 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[2-[[1-(2-sulfoethyl)naphtho[1,2-  
d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-,  
inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA  
INDEX NAME)

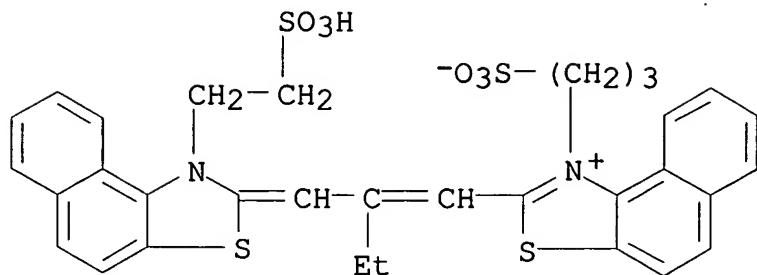
USHA SHRESTHA

REM 4B28

CM 1

CRN 146556-98-1

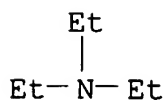
CMF C32 H30 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C001-46

ICS G03C001-08

NCL 430505000; 430502000; 430503000; 430504000; 430508000

CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)

IT 86-93-1 120-93-4, 2-Imidazolidinone 123-31-9, 1,4-Benzenediol,  
uses 149-30-4, 2(3H)-Benzothiazolethione 577-11-7 903-19-5  
1330-78-5, Tricresyl phosphate 1934-21-0 2211-98-5 2503-56-2  
2528-39-4, Trihexyl phosphate 2528-40-7, Tricyclohexyl phosphate  
3147-76-0 3864-99-1 6264-40-0 9003-32-1 18403-58-2  
25267-41-8 25704-18-1 26967-76-0 28327-34-6 28889-54-5  
33145-10-7 34421-11-9 53953-04-1 54949-95-0 63320-47-8  
**65293-95-0** 66096-14-8 66710-66-5 71177-53-2  
72386-53-9 75467-58-2 83044-89-7 86893-76-7 86947-01-5  
89929-65-7 93951-12-3 **94143-42-7** 94143-58-5  
**98835-00-8** 99107-49-0 99131-26-7 110067-65-7

USHA SHRESTHA

REM 4B28

111307-57-4 115895-09-5 137641-46-4 **138450-96-1**  
 141915-64-2 142000-29-1 144577-21-9 153163-60-1  
**156861-51-7** 160174-14-1D, trimethylsilyl terminated  
 176308-75-1 222176-33-2 **222184-90-9** 223507-11-7  
 246020-37-1 571187-17-2 615285-44-4 683789-12-0  
 683789-13-1 683789-14-2 683789-15-3 683789-16-4  
**683789-17-5** 683789-18-6 683789-20-0 683795-23-5

(color reversal photog. material with improved skin color reproduction containing interimage effect imparting layers having spectral distribution different than that of main color emulsion layers)

IT 120-95-6 20241-74-1 **68392-94-9 92771-57-8**  
 158554-82-6 **161710-77-6 189702-74-7**  
 220324-36-7 **252852-82-7 331229-71-1**  
**371759-46-5**

(interimage effect imparting layer; color reversal photog. material with improved skin color reproduction containing interimage effect imparting layers having spectral distribution different than that of main color emulsion layers)

L29 ANSWER 3 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:452117 HCAPLUS

DOCUMENT NUMBER: 139:44167

TITLE: Silver halide color reversal photographic materials with good color reproducibility

INVENTOR(S): Haraguchi, Nobuyuki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 71 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003167315	A2	20030613	JP 2001-370119	2001 1204

PRIORITY APPLN. INFO.:

JP 2001-370119

2001  
1204

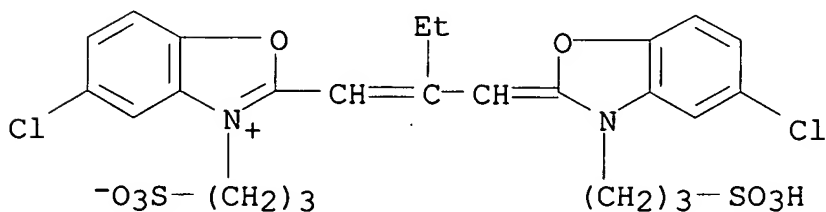
AB The photog. material comprising on a transparent substrate blue photog. emulsion layers containing yellow couplers, green photog. emulsion layers containing magenta couplers, and red photog. emulsion layers containing cyan couplers satisfies the following requirements: (A) the photog. material has  $\geq 1$  short-wavelength-**green-sensitive** emulsion layer (CL layer) with a maximum absorption wavelength ( $\lambda_{\text{cmax}}$ ) or central sensitivity wavelength ( $\lambda_{\text{c}}$ ) 490-560 nm and (B) the sensitivity of the blue emulsion layer at 530 nm is in the range of 1/200 of its maximum sensitivity and the maximum sensitivity or that at 550 nm is in the range of 1/300 of the maximum sensitivity and the maximum sensitivity.

IT **18360-25-3 68392-94-9 90901-34-1**  
**189702-75-8 193824-56-5 222042-24-2**  
**222184-90-9**

(sensitizer, blue emulsion layer containing; color reversal photog. materials with good color reproducibility)

RN 18360-25-3 HCAPLUS.

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

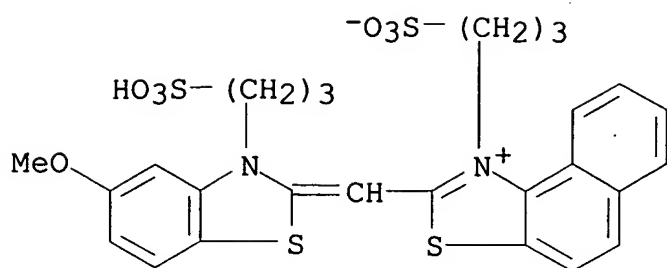
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

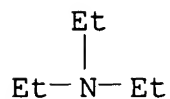
CMF C26 H26 N2 O7 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



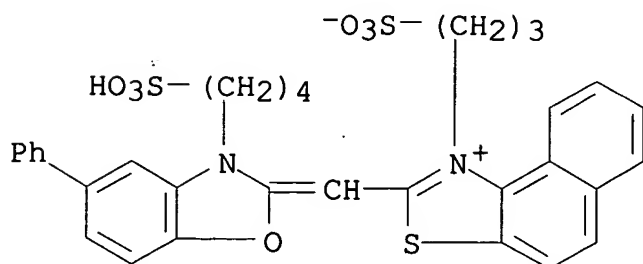
RN 90901-34-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 90901-33-0

CMF C32 H30 N2 O7 S3



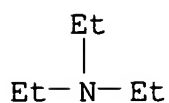
USHA SHRESTHA

REM 4B28

CM 2

CRN 121-44-8

CMF C6 H15 N



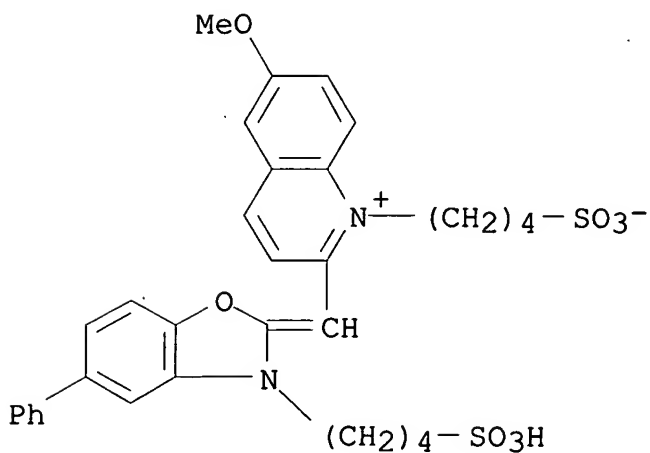
RN 189702-75-8 HCAPLUS

CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-(4-sulfoethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 189702-74-7

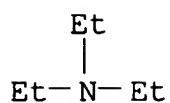
CMF C32 H34 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



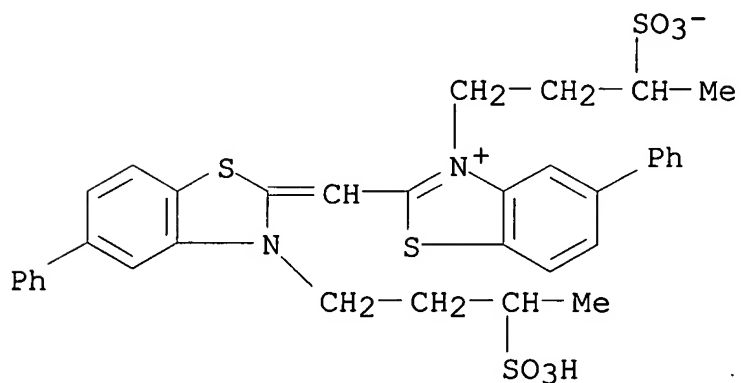
RN 193824-56-5 HCAPLUS

CN Benzothiazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 191108-34-6

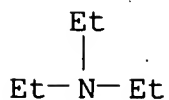
CMF C35 H34 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 222042-24-2 HCAPLUS

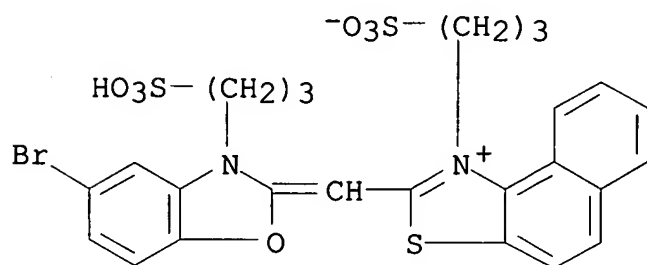
CN Naphtho[1,2-d]thiazolium, 2-[[5-bromo-3-(3-sulfopropyl)-2(3H)-

benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd.  
with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 222042-23-1

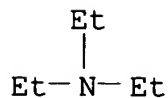
CMF C25 H23 Br N2 O7 S3



CM 2

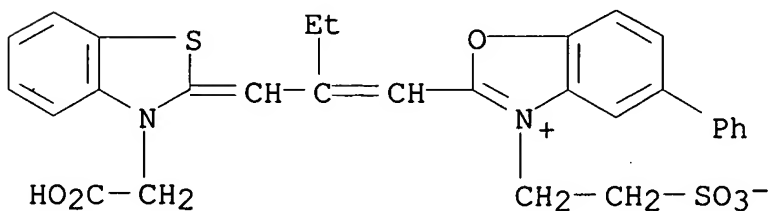
CRN 121-44-8

CMF C6 H15 N



RN 222184-90-9 HCAPLUS

CN Benzoxazolium, 2-[2-[[3-(carboxymethyl)-2(3H)-  
benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-,  
inner salt (9CI) (CA INDEX NAME)



USHA SHRESTHA

REM 4B28



IC ICM G03C007-20  
ICS G03C007-00  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT **18360-25-3 68392-94-9 90901-34-1**  
**189702-75-8 193824-56-5 222042-24-2**  
**222184-90-9**  
(sensitizer, blue emulsion layer containing; color reversal photog.  
materials with good color reproducibility)

L29 ANSWER 4 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:542322 HCAPLUS  
DOCUMENT NUMBER: 137:101349  
TITLE: Transparent imaging element with expanded  
color gamut  
INVENTOR(S): Edwards, James Lawrence; Aylward, Peter  
Thomas; Camp, Alphonse Dominic; Bourdelais,  
Robert Paul  
PATENT ASSIGNEE(S): Eastman Kodak Company, USA  
SOURCE: Brit. UK Pat. Appl., 121 pp.  
CODEN: BAXXDU  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
GB 2367373	A1	20020403	GB 2001-20464	2001 0823
US 6406837	B1	20020618	US 2000-664496	2000 0918
PRIORITY APPLN. INFO.:			US 2000-664496	A 2000 0918

AB An imaging element comprises a transparent polymer sheet, and at least one photosensitive dye forming coupler containing layer is on each side of said sheet and wherein there are at least four sep. photosensitive layers and the photosensitive layers comprise at least four dye forming couplers that form at least four spectrally distinct colors. Dye forming couplers include cyan, yellow,

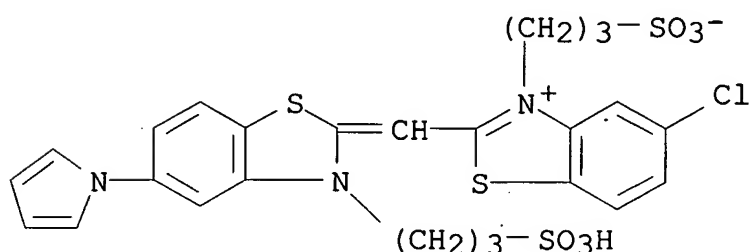
magenta, red and blue. The invention provides an imaging material with an improved color gamut while maintaining typical the 45 s color development time.

IT **161710-68-5 172210-73-0**

(blue sensitive dye; photog. transparent imaging element with expanded color gamut containing)

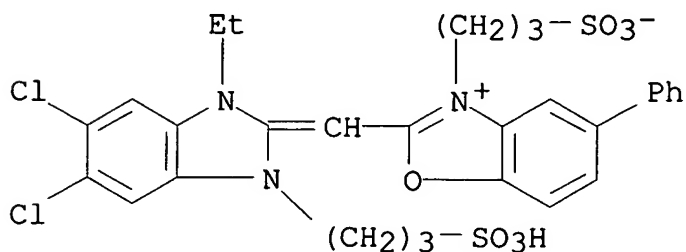
RN 161710-68-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 172210-73-0 HCAPLUS

CN Benzoxazolium, 2-[[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]methyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

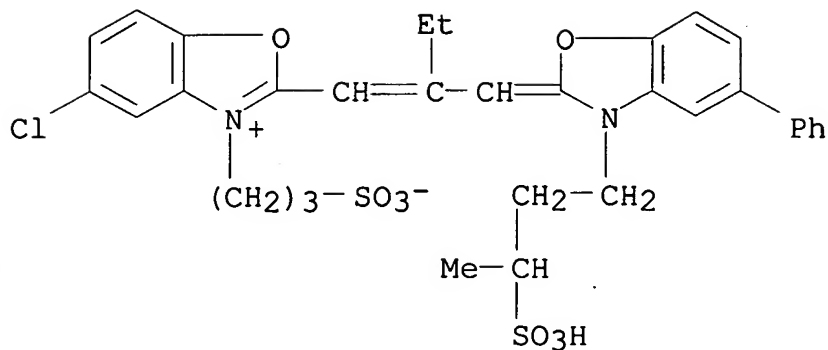


IT **28118-05-0 129693-66-9**

(green sensitive dye; photog. transparent imaging element with expanded color gamut containing)

RN 28118-05-0 HCAPLUS

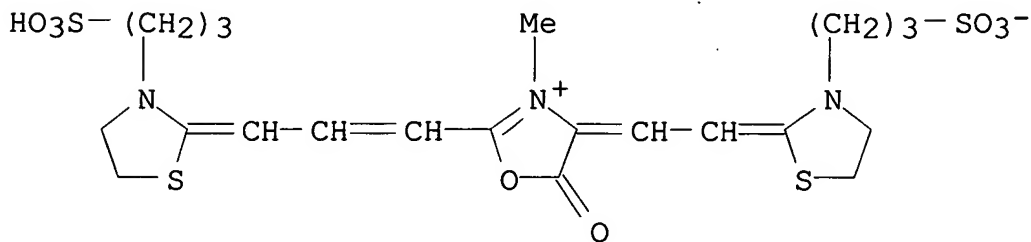
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 129693-66-9 HCAPLUS

CN Oxazolium, 4,5-dihydro-3-methyl-5-oxo-4-[[3-(3-sulfopropyl)-2-thiazolidinyldene]ethylidene]-2-[3-[3-(3-sulfopropyl)-2-thiazolidinyldene]-1-propenyl]-, inner salt, sodium salt (9CI)  
(CA INDEX NAME)



● Na

IC ICM G03C007-30

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38

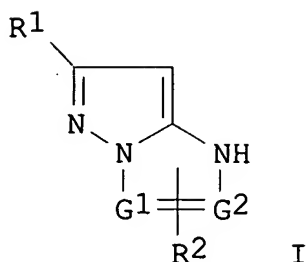
IT 161710-68-5 172210-73-0

(blue sensitive dye; photog. transparent imaging element with

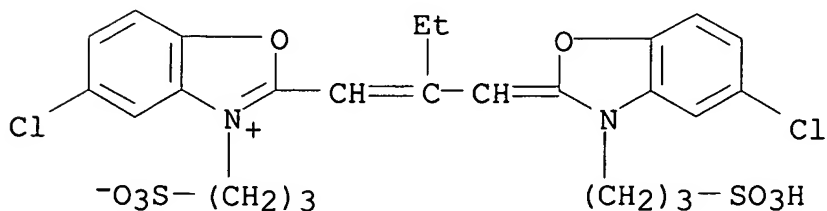
expanded color gamut containing)  
 IT 28118-05-0 129693-66-9  
 (green sensitive dye; photog. transparent  
 imaging element with expanded color gamut containing)

L29 ANSWER 5 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:816268 HCAPLUS  
 DOCUMENT NUMBER: 135:350446  
 TITLE: Silver halide color photographic materials  
 containing pyrazolotriazole derivative magenta  
 couplers with excellent color reproducibility  
 INVENTOR(S): Matsuda, Naoto; Shimura, Yoshio; Nakamura,  
 Akio; Mikoshiba, Takashi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 82 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2001312032	A2	20011109	JP 2000-153318	2000 0524
US 6379878	B1	20020430	US 2000-580658	2000 0526
PRIORITY APPLN. INFO.:			JP 1999-149800	A 1999 0528
			JP 2000-48220	A 2000 0224
OTHER SOURCE(S):			MARPAT 135:350446	
GI				



- AB The material has  $\geq 1$  blue-sensitive emulsion layer(s),  $\geq 1$  **green-sensitive** emulsion layer(s) containing I ( $R_1$  = secondary or tertiary alkyl, aryl, alkoxy, aryloxy, amino, acylamino, arylthio, alkylthio, aminocarbonylamino, alkoxy carbonylamino, carbamoyloxy, heterocyclic thio;  $G_{1,2}$  = N, C;  $R_2$  = substituent), and  $\geq 1$  red-sensitive emulsion layer(s) having a maximum sensitivity at 580-650 nm. The material may have a photosensitive Ag halide layer which does not contribute substantially to image formation but gives inter-image effects on the other layers.
- IT **18360-25-3 189702-75-8 222042-24-2**  
(photosensitive layer containing; Ag halide color photog. materials containing pyrazolotriazole magenta couplers with good color reproducibility)
- RN 18360-25-3 HCAPLUS
- CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

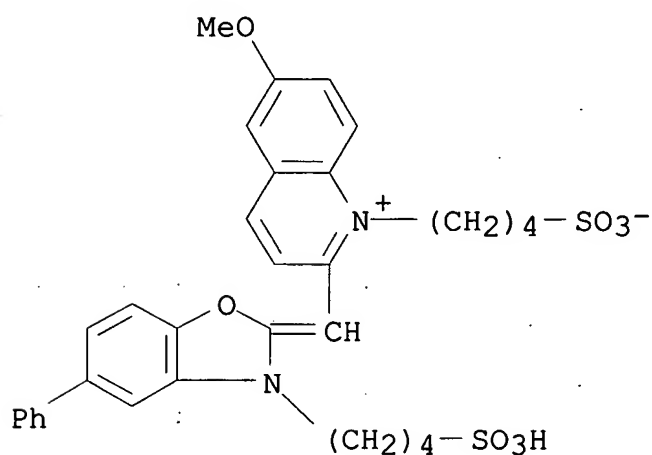
RN 189702-75-8 HCAPLUS

CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 189702-74-7

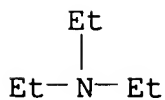
CMF C32 H34 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



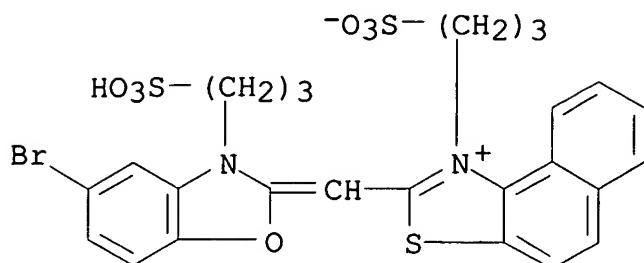
RN 222042-24-2 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-bromo-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 222042-23-1

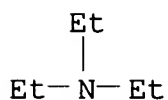
CMF C25 H23 Br N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N

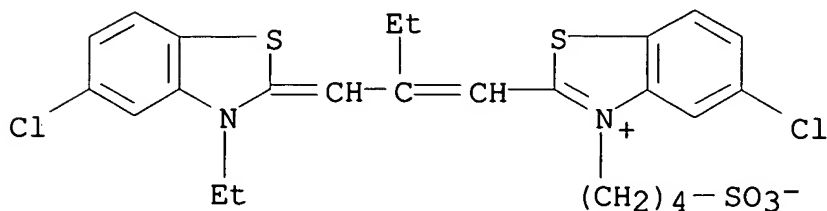


IT 94143-42-7 98835-00-8 109775-22-6  
148364-34-5 371759-46-5

(red-sensitive layer containing; Ag halide color photog. materials containing pyrazolotriazole magenta couplers with good color reproducibility)

RN 94143-42-7 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolyldiene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

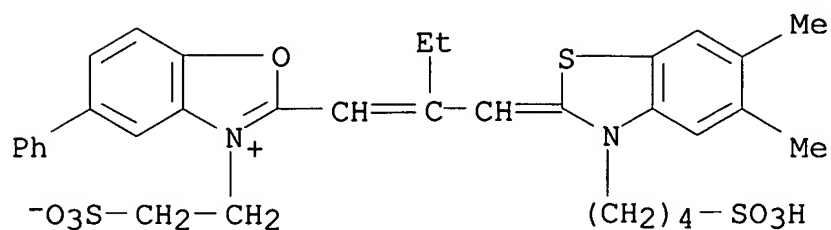


USHA SHRESTHA

REM 4B28

RN 98835-00-8 HCAPLUS

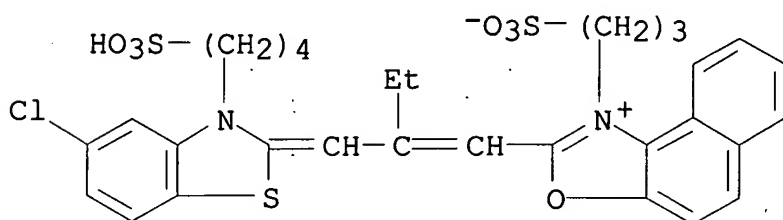
CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 109775-22-6 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

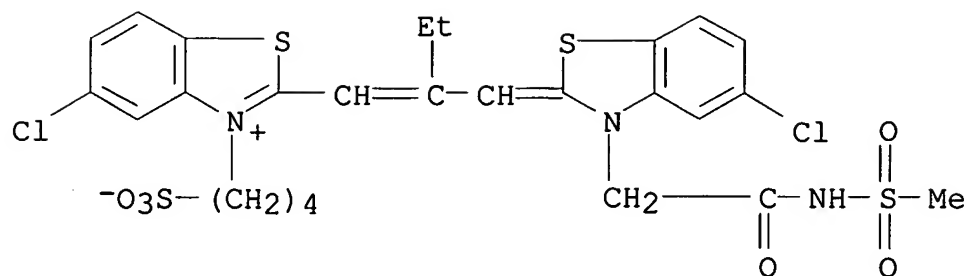


● Na

RN 148364-34-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)





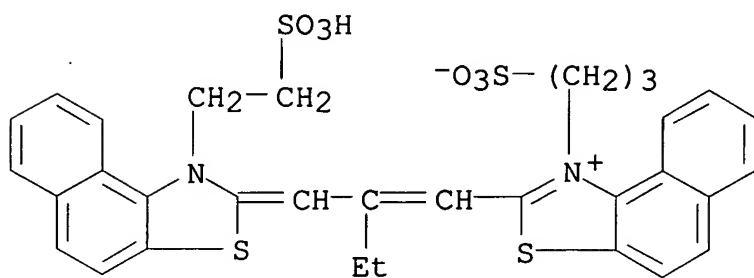
RN 371759-46-5 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[2-[[1-(2-sulfoethyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146556-98-1

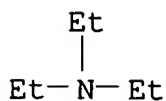
CMF C32 H30 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-38

ICS G03C001-14; G03C007-18; G03C007-20  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 ST silver halide color photog material sensitivity; pyrazolotriazole  
 magenta coupler **green sensitive** emulsion;  
 cyanine dye sensitizer red reproducibility  
 IT 224317-36-6 291543-61-8 359685-22-6 359685-27-1  
 371759-41-0 371759-42-1 371759-43-2 371759-44-3  
 (**green-sensitive** layer containing; Ag halide  
 color photog. materials containing pyrazolotriazole magenta  
 couplers with good color reproducibility)  
 IT **18360-25-3 189702-75-8 222042-24-2**  
 (photosensitive layer containing; Ag halide color photog. materials  
 containing pyrazolotriazole magenta couplers with good color  
 reproducibility)  
 IT **94143-42-7 94143-58-5 98835-00-8**  
**109775-22-6 148364-34-5 371759-46-5**  
 (red-sensitive layer containing; Ag halide color photog. materials  
 containing pyrazolotriazole magenta couplers with good color  
 reproducibility)

L29 ANSWER 6 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:261321 HCAPLUS  
 DOCUMENT NUMBER: 134:302953  
 TITLE: Silver halide color photosensitive material  
 INVENTOR(S): Goto, Masaki; Watanabe, Yasuhiro; Otani,  
 Hiroshi  
 PATENT ASSIGNEE(S): Konica Co., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 91 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001100375	A2	20010413	JP 1999-274836	1999 0928
PRIORITY APPLN. INFO.:			JP 1999-274836	1999 0928

OTHER SOURCE(S): MARPAT 134:302953

AB In the photog. material comprising a support coated with  $\geq 1$  red-sensitive,  $\geq 1$  **green-sensitive**,  $\geq 1$  blue-sensitive  $\geq 1$  nonphotosensitive layers, and  $\geq 1$  interlayer effect layer, the interlayer effect layer has maximum spectral sensitivity wavelength at  $\leq 500$  or  $\geq 560$  nm (which is different from the maximum wavelength of the red-sensitive, **green-sensitive**, and blue-sensitive layers) and contains a compound satisfying the following; the compound comprises a coupling component (Cp), a photog. useful component (A), and a timing group (Time), and cleaves between Cp and Time by the coupling reaction with the developer oxide and then cleaves between A and Time by electron-transfer reaction or intramol. nucleophilic reaction to release the photog. useful component. The material may comprise a support having  $\geq 1$  nonphotosensitive layer and  $\geq 1$  non-visible ray-sensitive layer having maximum spectral sensitivity wavelength at  $\geq 700$  nm and containing Ag halide emulsion spectrally sensitized with  $\geq 2$  dyes having different charges. The material shows high sensitivity, storage stability, and gives low fog images with good color reproducibility.

IT 124905-13-1 334659-78-8 334659-81-3  
334659-83-5 334659-85-7 334659-87-9  
334659-89-1

(photog. film having non-visible ray-sensitive layer containing spectral sensitizers)

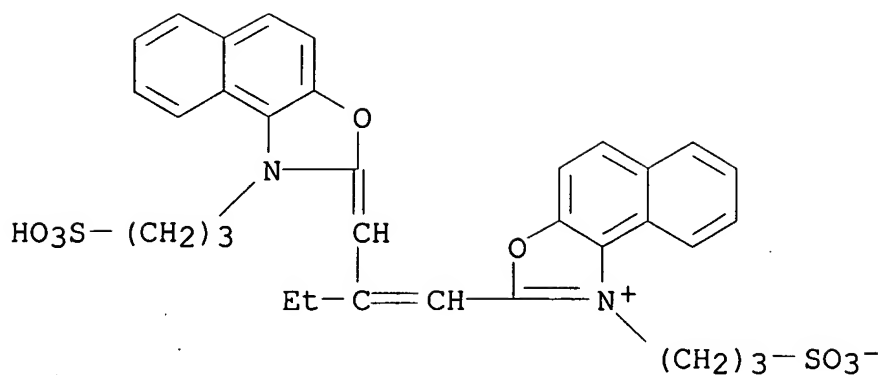
RN 124905-13-1 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 28317-17-1

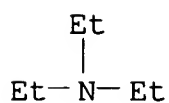
CMF C33 H32 N2 O8 S2



CM 2

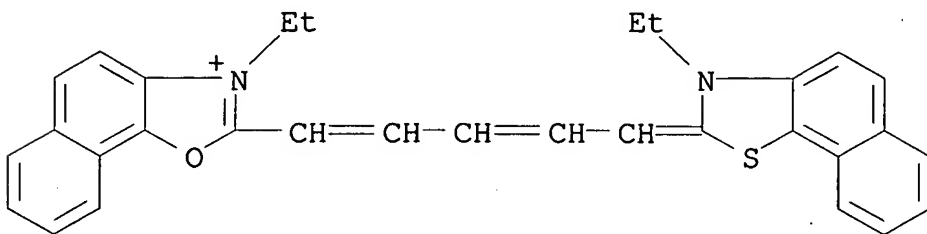
CRN 121-44-8

CMF C6 H15 N



RN 334659-78-8 HCAPLUS

CN Naphth[2,1-d]oxazolium, 3-ethyl-2-[5-(3-ethylnaphtho[2,1-d]thiazol-2(3H)-ylidene)-1,3-pentadienyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

USHA SHRESTHA

REM 4B28

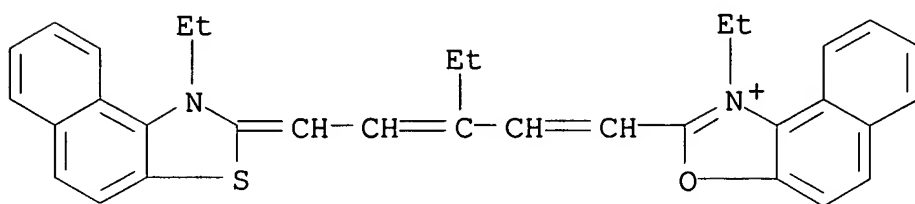
RN 334659-81-3 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-ethyl-2-[3-ethyl-5-(1-ethylnaphtho[1,2-d]thiazol-2(1H)-ylidene)-1,3-pentadienyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 334659-80-2

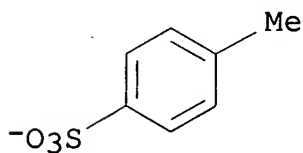
CMF C33 H31 N2 O S



CM 2

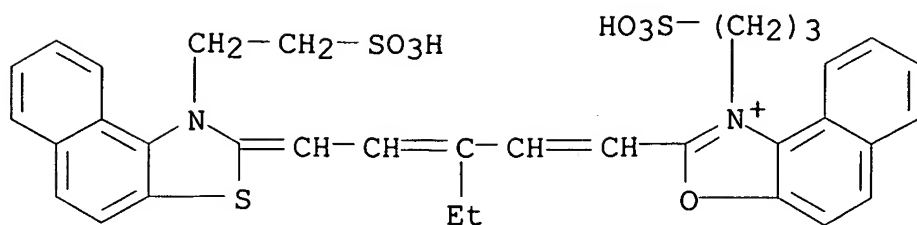
CRN 16722-51-3

CMF C7 H7 O3 S



RN 334659-83-5 HCAPLUS

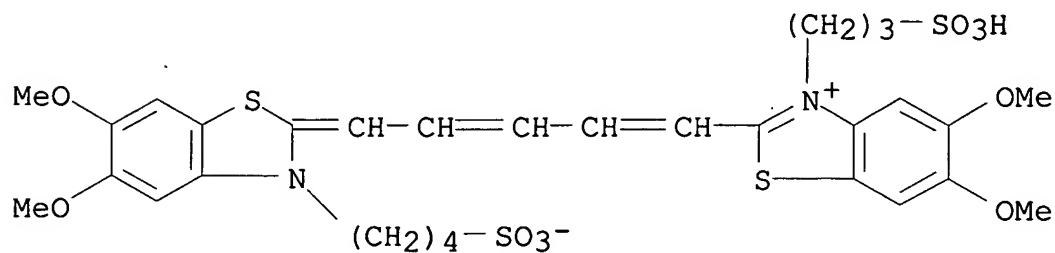
CN Naphth[1,2-d]oxazolium, 2-[3-ethyl-5-[1-(2-sulfoethyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]-1,3-pentadienyl]-1-(3-sulfopropyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 334659-85-7 HCAPLUS

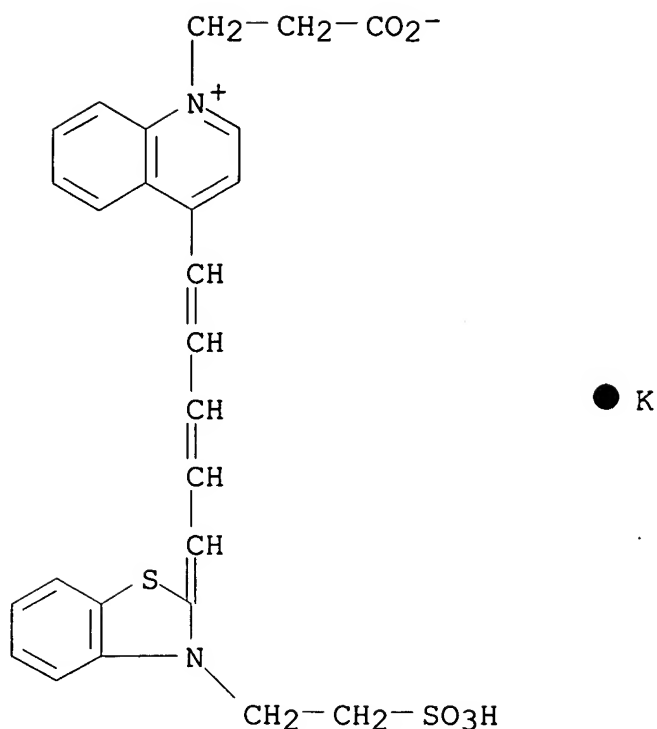
CN Benzothiazolium, 2-[5-[5,6-dimethoxy-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-5,6-dimethoxy-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

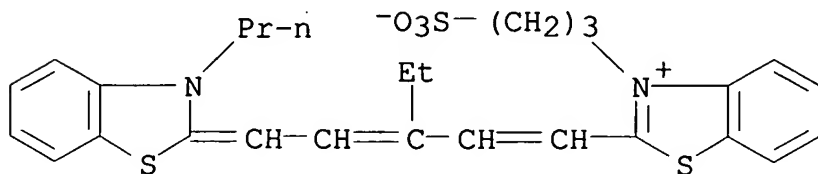
RN 334659-87-9 HCAPLUS

CN Quinolinium, 1-(2-carboxyethyl)-4-[5-[3-(2-sulfoethyl)-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-, inner salt, potassium salt (9CI) (CA INDEX NAME)



RN 334659-89-1 HCAPLUS

CN Benzothiazolium, 2-[3-ethyl-5-(3-propyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-18

ICS C09B023-00; G03C001-10; G03C001-20; G03C001-26; G03C001-29; G03C005-02; G03C007-305; G03C007-392

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **124905-13-1** 144675-42-3 147076-57-1 159104-87-7  
207274-77-9 **334659-78-8 334659-81-3**  
**334659-83-5 334659-85-7 334659-87-9**

334659-89-1 334659-92-6 334659-94-8 334659-97-1  
 334660-00-3 334660-02-5 334660-04-7 334660-05-8  
 334660-06-9 334660-08-1 334660-09-2

(photog. film having non-visible ray-sensitive layer containing spectral sensitizers)

L29 ANSWER 7 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:73432 HCAPLUS  
 DOCUMENT NUMBER: 134:139180  
 TITLE: Photographic imaging system incorporating  
 metadata recording capability  
 INVENTOR(S): Edwards, James L.  
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA  
 SOURCE: U.S., 37 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6180312	B1	20010130	US 2000-532928	2000 0322
EP 1136883	A2	20010926	EP 2001-200932	2001 0312
EP 1136883	A3	20030903		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001281818	A2	20011010	JP 2001-83063	2001 0322
PRIORITY APPLN. INFO.:			US 2000-532928	A 2000 0322

AB The invention relates to a color neg. photog. element comprising a support, upon which is coated a blue sensitive silver halide layer containing a yellow dye forming coupler, a **green sensitive** silver halide layer containing a magenta dye forming coupler, a red sensitive silver halide layer containing a cyan dye forming coupler, and a 4th sensitized layer containing an IR dye



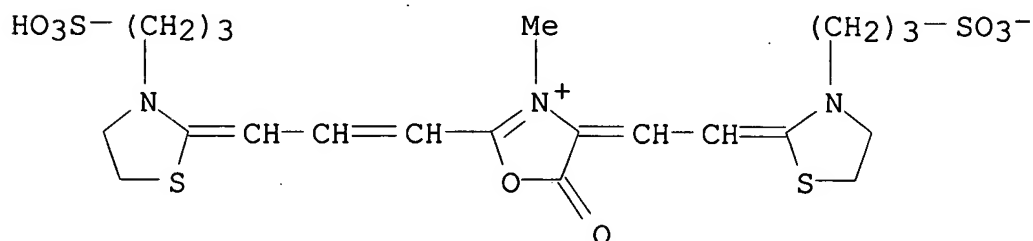
forming coupler and wherein the dye formed by the IR dye forming coupler has a  $\lambda$ -max greater than 680 nm and wherein the d. of the absorption band of the characteristic vector of the cyan dye, normalized to 1.0 d., is less than 0.4 at 700 nm.

IT 129693-66-9 161710-68-5 312959-06-1  
321750-19-0

(sensitizing dye in photog. imaging system incorporating metadata recording capability)

RN 129693-66-9 HCAPLUS

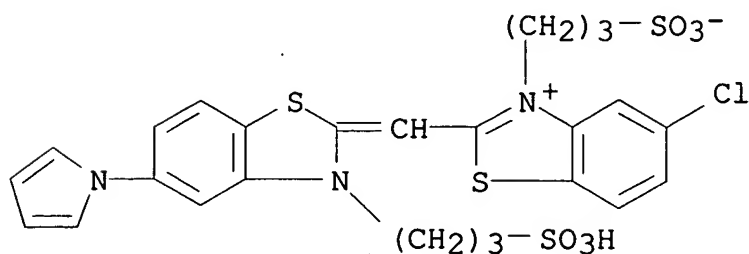
CN Oxazolium, 4,5-dihydro-3-methyl-5-oxo-4-[[3-(3-sulfopropyl)-2-thiazolidinylidene]ethylidene]-2-[3-[3-(3-sulfopropyl)-2-thiazolidinylidene]-1-propenyl]-, inner salt, sodium salt (9CI)  
(CA INDEX NAME)



● Na

RN 161710-68-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)

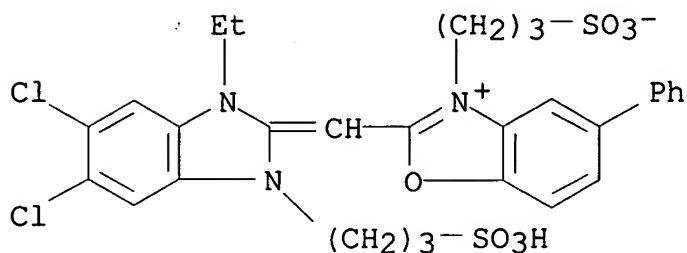


RN 312959-06-1 HCAPLUS

USHA SHRESTHA

REM 4B28

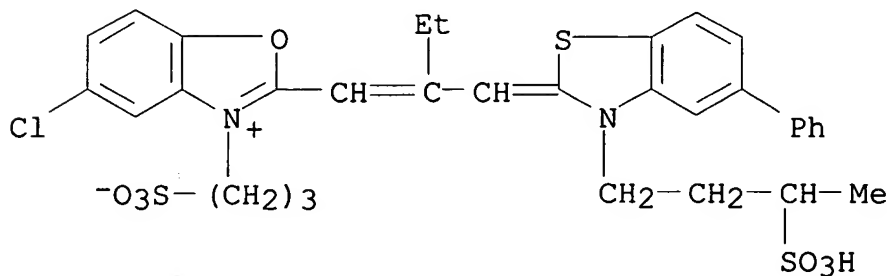
CN Benzoxazolium, 2-[[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]methyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 321750-19-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C001-46

NCL 430140000

CC 74-3 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 64285-48-9 **129693-66-9** 136282-61-6 **161710-68-5**

312959-02-7 312959-04-9 **312959-06-1**

**321750-19-0** 321750-22-5

(sensitizing dye in photog. imaging system incorporating metadata recording capability)

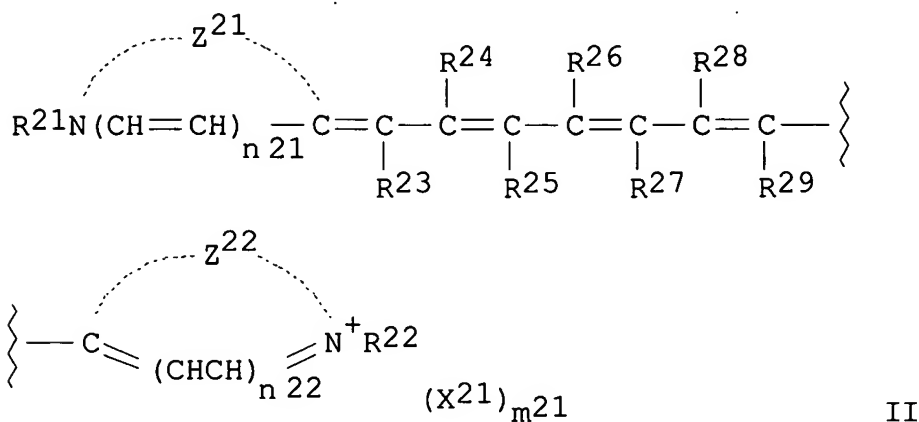
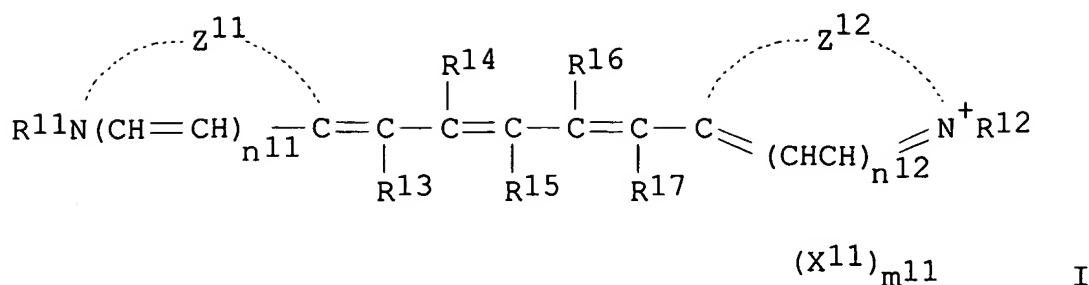
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE

USHA SHRESTHA REM 4B28

FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L29 ANSWER 8 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2000:77226 HCAPLUS  
DOCUMENT NUMBER: 132:129945  
TITLE: Silver halide photographic material having  
non-visible ray-sensitive layer and infrared  
ray-cut layer  
INVENTOR(S): Kasai, Yoshitami; Fukazawa, Fumie  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 80 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000035647	A2	20000202	JP 1998-203397	1998 0717
PRIORITY APPLN. INFO.:			JP 1998-203397	1998 0717
OTHER SOURCE(S):	MARPAT 132:129945			
GI				



AB The title material, possessing  $\geq 1$  red-sensitive,  $\geq 1$  **green-sensitive**, and  $\geq 1$  blue-sensitive Ag halide emulsion layers each of which contains a coupler and a non-visible ray-sensitive Ag halide emulsion layer on a support, contains  $\geq 1$  compound I or II [Z<sup>11</sup>, Z<sup>12</sup>, Z<sup>21</sup>, Z<sup>22</sup> = nonmetal atoms required to form a 5- or 6-membered single ring or its condensed N-containing heterocycle; R<sup>11</sup>, R<sup>12</sup>, R<sup>21</sup>, R<sup>22</sup> = aliphatic group;

R<sup>13</sup>-R<sup>17</sup>, R<sup>23</sup>-R<sup>29</sup> = H, alkyl, alkoxy, aryloxy, aryl, NW<sup>1</sup>W<sup>2</sup>, SR (W<sup>1</sup>, W<sup>2</sup> = alkyl, aryl, heterocyclic group, W<sup>1</sup> and W<sup>2</sup> may link each other to form a 5- or 6-membered N-containing heterocycle; R = alkyl, aryl, heterocyclic group), heterocyclic group, R<sup>11</sup> and R<sup>13</sup>, R<sup>14</sup> and R<sup>16</sup>, R<sup>17</sup> and R<sup>12</sup>, R<sup>21</sup> and R<sup>23</sup>, R<sup>24</sup> and R<sup>26</sup>, R<sup>25</sup> and R<sup>27</sup>, R<sup>26</sup> and R<sup>28</sup>, and R<sup>22</sup> and R<sup>29</sup> may link each other to form a 5- or 6-membered ring or its condensed ring; X<sup>11</sup>, X<sup>21</sup> = ion required to neutralize the charge in the each mol.; m<sup>11</sup>, m<sup>21</sup> = number of the ions required to neutralize the charge in the each mol.; n<sup>11</sup>, n<sup>12</sup>, n<sup>21</sup>, n<sup>22</sup> = 0 or 1] and  $\geq 1$  image quality-improving agent in the non-visible ray-sensitive emulsion layer and  $\geq 1$  IR ray-cut

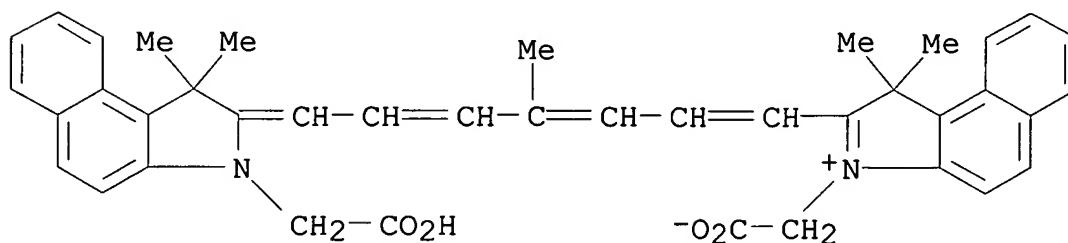
layer. The material, possessing the above 3 kinds of color-sensitive emulsion layers on a support, may contain  $\geq 1$  compound I or II in  $\geq 1$  of these emulsion layers and  $\geq 1$  IR ray-cut layer. The material provides a high quality color image with improved color reproducibility and can suppress fogging due to IR sensors installed in conveying system.

IT **256431-04-6**

(IR absorbing dye; photog. film having non-visible ray-sensitive layer and IR-cut layer containing black colloidal silver or IR absorbing dye)

RN 256431-04-6 HCAPLUS

CN 1H-Benz[e]indolium, 3-(carboxymethyl)-2-[7-[3-(carboxymethyl)-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene]-4-methyl-1,3,5-heptatrienyl]-1,1-dimethyl-, inner salt (9CI) (CA INDEX NAME)

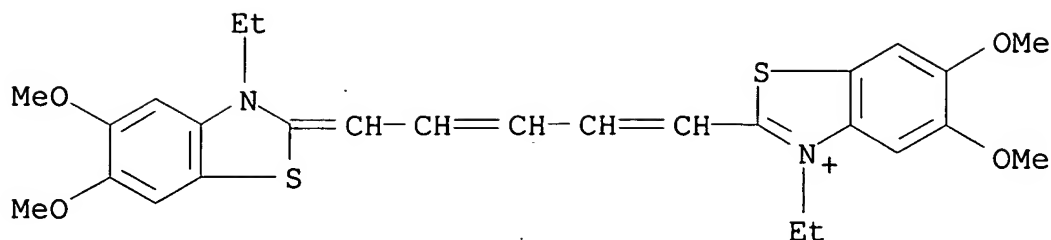


IT **51532-40-2**

(IR sensitizer; photog. film having non-visible ray-sensitive layer containing IR sensitizer and IR-cut layer)

RN 51532-40-2 HCAPLUS

CN Benzothiazolium, 3-ethyl-2-[5-(3-ethyl-5,6-dimethoxy-2(3H)-benzothiazolylidene)-1,3-pentadienyl]-5,6-dimethoxy-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

IC ICM G03C007-20  
ICS G03C001-20; G03C001-825; G03C007-392  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 143805-21-4 177167-91-8 256431-03-5 **256431-04-6**  
(IR absorbing dye; photog. film having non-visible  
ray-sensitive layer and IR-cut layer containing black colloidal  
silver or IR absorbing dye)  
IT **51532-40-2** 177167-90-7  
(IR sensitizer; photog. film having non-visible ray-sensitive  
layer containing IR sensitizer and IR-cut layer)

L29 ANSWER 9 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:557084 HCAPLUS  
DOCUMENT NUMBER: 131:206903  
TITLE: Silver halide photographic material with  
non-visible light-sensitive silver halide  
emulsion layer  
INVENTOR(S): Watanabe, Yasuhiro; Kakawa, Nobuaki  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 11237706	A2	19990831	JP 1998-40437	

USHA SHRESTHA REM 4B28

1998  
0223

PRIORITY APPLN. INFO.:

JP 1998-40437

1998  
0223OTHER SOURCE(S): MARPAT 131:206903  
GI\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*

AB The title photog. material possesses  $\geq 1$  red-sensitive,  $\geq 1$  **green-sensitive**, and  $\geq 1$  blue-sensitive Ag halide emulsion layers, each of which contains a coupler, and a non-visible light-sensitive Ag halide emulsion layer on a support. The nonvisible light-sensitive layer contains  $\geq 1$  compound selected from methines I-IV [Z11, Z12, Z21, Z22, Z31, Z41, Z42 = nonmetal atoms required to complete a 5- or 6-membered single ring or its condensed N-containing heterocycle; Q31, Q32, Q41 = O, S, Se, :NR (R = alkyl, aryl, heterocycle); R11, R12, R21, R22, R31, R41, R43 = aliphatic group; R32, R33, R42 = aliphatic group, aryl, heterocycle; R13-17, R23-29, R34-39, R44-49 = H, alkyl, alkoxy, aryloxy, aryl, NW1W2 (W1, W2 = alkyl, aryl, W1 and W2 may form a 5- or 6-membered heterocycle), SR (R = alkyl, aryl, heterocycle), heterocycle, R11 and R13, R14 and R16, R17 and R12, R21 and R23, R24 and R26, R25 and R27, R26 and R28, R22 and R29, R31 and R34, R35 and R37, R36 and R38, R41 and R44, R45 and R47, and R49 and R43 may link each other to form a 5- or 6-membered ring or its condensed ring; X11, X21, X41 = ion required to neutralize the charge in the mols.; m11, m21, m41 = number of the ion required to neutralize the charge in the mols.; n11, n12, n21, n22, n31, n41, n42 = 0, 1; l31-33, l41-43 = 0, 1; when l42 = 0, l41 = l43 = 0] and  $\geq 1$  agent for improving the quality of image. The photog. material containing the IR sensitizers shows high sensitivity and low fog in the presence of the agent for improving quality of image, e.g., magenta couplers.

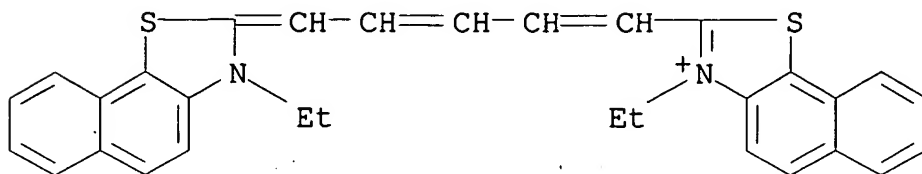
IT 61526-53-2 122216-51-7 130754-56-2  
241148-60-7 241148-61-8 241148-62-9  
241487-72-9 241487-74-1

(sensitizer; photog. emulsion involving nonvisible  
light-sensitive layer containing IR sensitizer showing fog

inhibition)

RN 61526-53-2 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 3-ethyl-2-[5-(3-ethylnaphtho[2,1-d]thiazol-2(3H)-ylidene)-1,3-pentadienyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

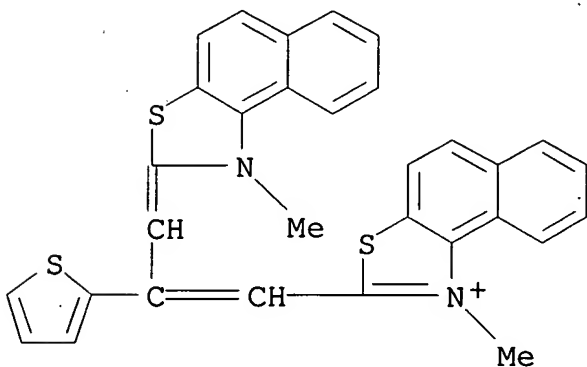
RN 122216-51-7 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-methyl-2-[3-(1-methylnaphtho[1,2-d]thiazol-2(1H)-ylidene)-2-(2-thienyl)-1-propenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 122216-50-6

CMF C31 H23 N2 S3



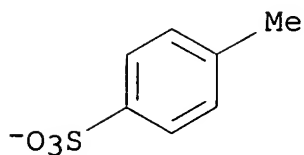
CM 2

USHA SHRESTHA

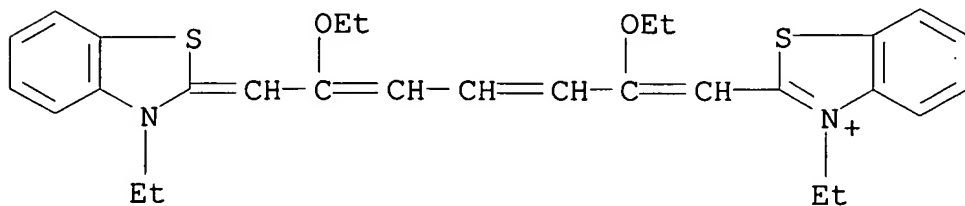
REM 4B28



CRN 16722-51-3  
CMF C7 H7 O3 S

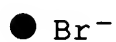
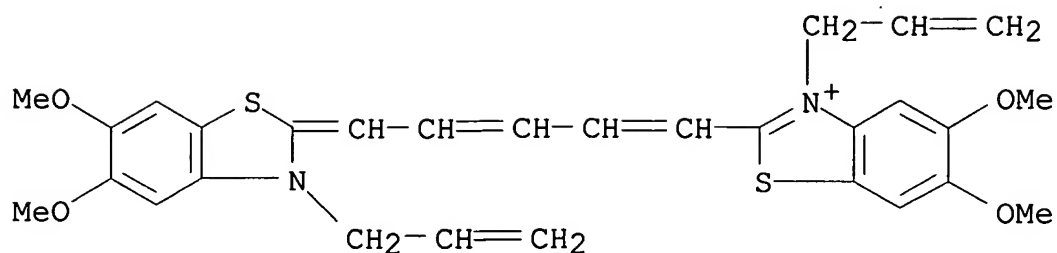


RN 130754-56-2 HCAPLUS  
CN Benzothiazolium, 2-[2,6-diethoxy-7-(3-ethyl-2(3H)-benzothiazolylidene)-1,3,5-heptatrienyl]-3-ethyl-, iodide (9CI)  
(CA INDEX NAME)



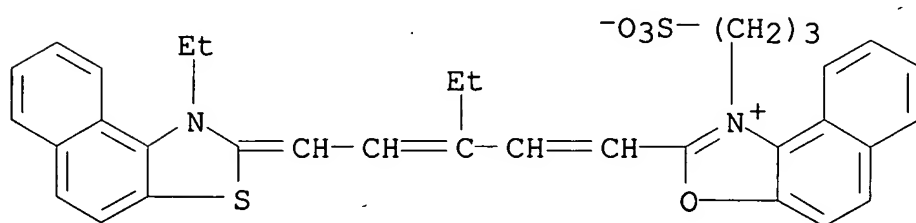
● I<sup>-</sup>

RN 241148-60-7 HCAPLUS  
CN Benzothiazolium, 2-[5-[5,6-dimethoxy-3-(2-propenyl)-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-5,6-dimethoxy-3-(2-propenyl)-, bromide (9CI) (CA INDEX NAME)



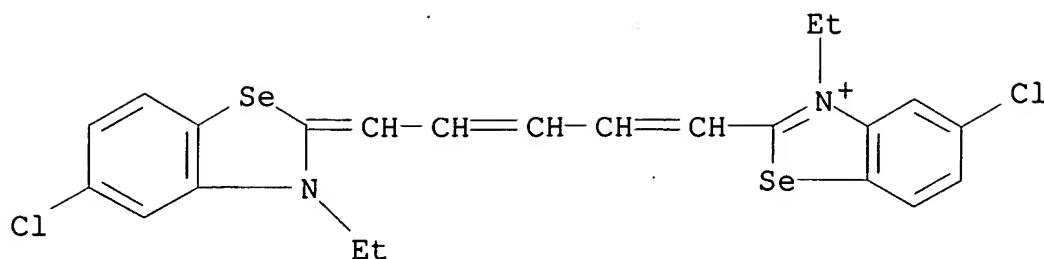
RN 241148-61-8 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-ethyl-5-(1-ethylnaphtho[1,2-d]thiazol-2(1H)-ylidene)-1,3-pentadienyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 241148-62-9 HCAPLUS

CN Benzoselenazolium, 5-chloro-2-[5-(5-chloro-3-ethyl-2(3H)-benzoselenazolylydene)-1,3-pentadienyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

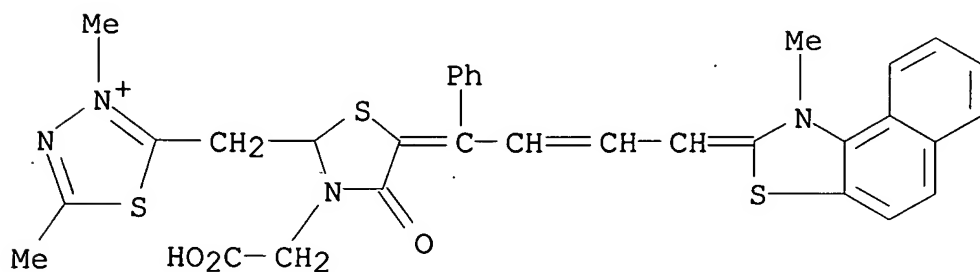
RN 241487-72-9 HCAPLUS

CN 1,3,4-Thiadiazolium, 2-[[3-(carboxymethyl)-5-[4-(1-methylnaphtho[1,2-d]thiazol-2(1H)-ylidene)-1-phenyl-2-butenylidene]-4-oxo-2-thiazolidinyl]methyl]-3,5-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 241487-71-8

CMF C32 H29 N4 O3 S3



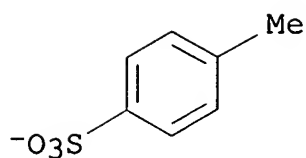
CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

USHA SHRESTHA

REM 4B28



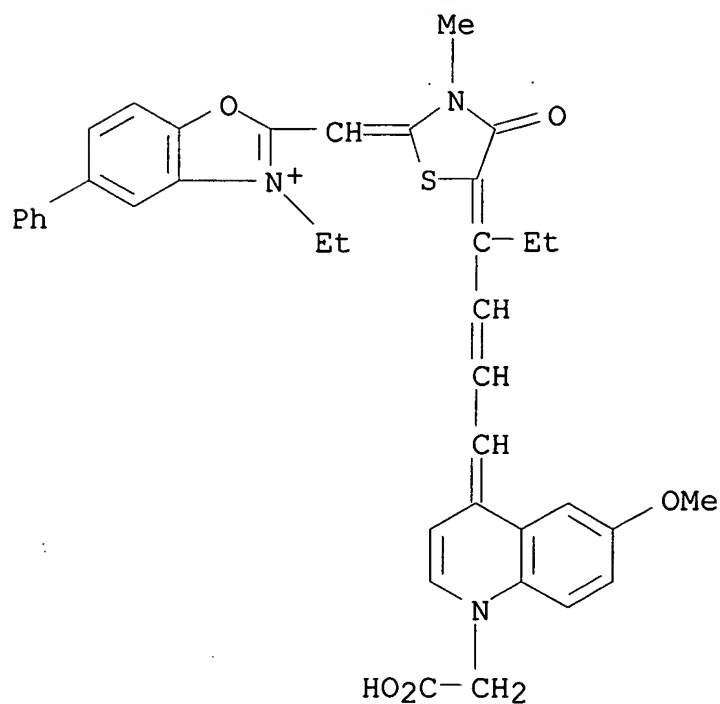
RN 241487-74-1 HCAPLUS

CN Benzoxazolium, 2-[[5-[4-[1-(carboxymethyl)-6-methoxy-4(1H)-quinolinylidene]-1-ethyl-2-butenylidene]-3-methyl-4-oxo-2-thiazolidinylidene]methyl]-3-ethyl-5-phenyl-, tetrafluoroborate(1-)  
(9CI) (CA INDEX NAME)

CM 1

CRN 241487-73-0

CMF C38 H36 N3 O5 S

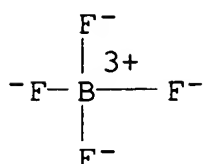


CM 2

USHA SHRESTHA

REM 4B28

CRN 14874-70-5  
 CMF B F4  
 CCI CCS



IC ICM G03C001-20  
 ICS G03C001-22; G03C001-26; G03C007-20  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 58046-79-0 **61526-53-2** 79151-28-3 95889-43-3  
 98379-17-0 **122216-51-7 130754-56-2**  
 138707-54-7 144675-42-3 146486-80-8 146486-83-1  
 147076-57-1 240425-46-1 **241148-60-7**  
**241148-61-8 241148-62-9** 241148-63-0  
 241148-64-1 241148-65-2 241148-67-4 241487-66-1  
 241487-68-3 241487-69-4 241487-70-7 **241487-72-9**  
**241487-74-1**  
 (sensitizer; photog. emulsion involving nonvisible  
 light-sensitive layer containing IR sensitizer showing fog  
 inhibition)

L29 ANSWER 10 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:451479 HCAPLUS  
 DOCUMENT NUMBER: 131:94805  
 TITLE: Color photographic material with improved  
 color reproduction and sensitivity  
 INVENTOR(S): Siegel, Joerg; Borst, Hans-Ulrich; Bell,  
 Peter; Buescher, Ralf; Willsau, Johannes  
 PATENT ASSIGNEE(S): Agfa-Gevaert A.-G., Germany  
 SOURCE: Ger. Offen., 16 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA	REM 4B28			
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DE 19800836	A1	19990715	DE 1998-19800836	1998
				0113
JP 11249266	A2	19990917	JP 1999-3063	1999
				0108
PRIORITY APPLN. INFO.:			DE 1998-19800836	A
				1998
				0113

AB The title full color photog. material contains a cyanine dye, showing its absorption maximum at 428-500 nm in methanol, in the blue-sensitive Ag halide emulsion layers and in the **green** -sensitive Ag halide emulsion layers. The material shows improved color (blue and green) reproduction and sensitivity.

IT **189702-75-8 229498-75-3 229498-76-4**  
**229498-77-5 229498-79-7**

(cyanine dye in color photog. material for improving color reproduction and sensitivity)

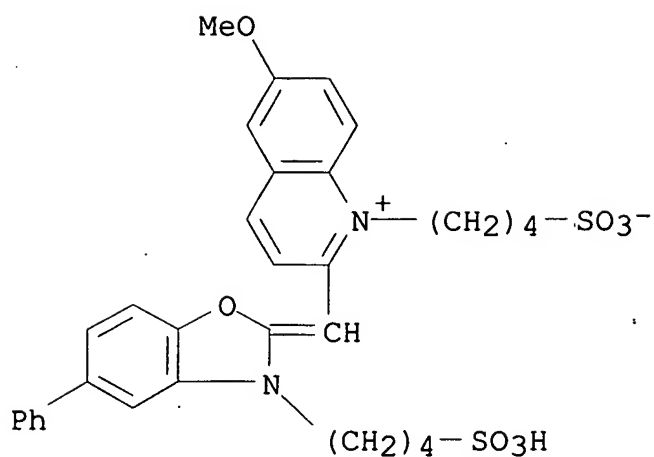
RN 189702-75-8 HCAPLUS

CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolyliidene]methyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 189702-74-7

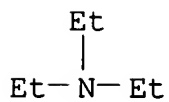
CMF C32 H34 N2 O8 S2



CM 2

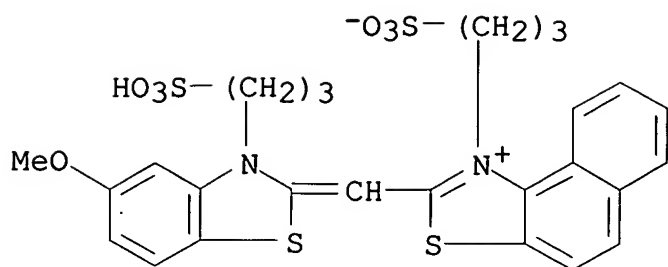
CRN 121-44-8

CMF C6 H15 N



RN 229498-75-3 HCAPLUS

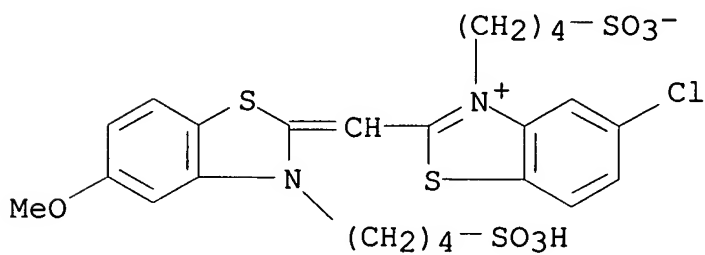
CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 229498-76-4 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

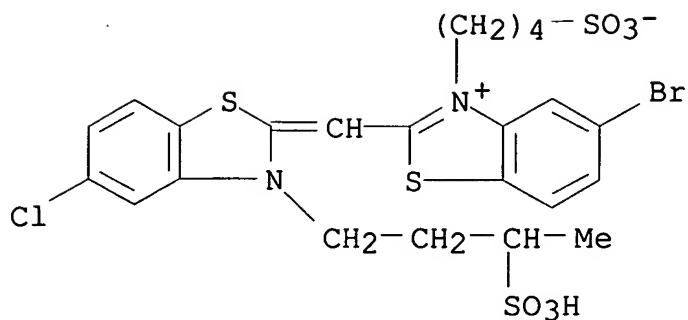


● Na

RN 229498-77-5 HCAPLUS

CN Benzothiazolium, 5-bromo-2-[[5-chloro-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)





● K

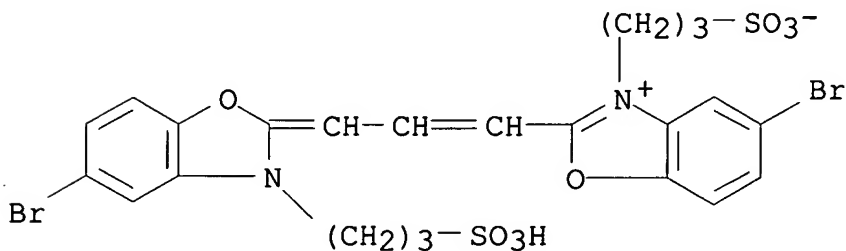
RN 229498-79-7 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[3-[5-bromo-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 229498-78-6

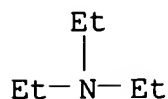
CMF C23 H22 Br2 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-30  
ICS G03C001-12  
ICA C09B023-01; C09B053-00; C09B055-00  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT **189702-75-8 229498-75-3 229498-76-4**  
**229498-77-5 229498-79-7**  
(cyanine dye in color photog. material for improving color  
reproduction and sensitivity)

L29 ANSWER 11 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:111855 HCAPLUS  
DOCUMENT NUMBER: 130:189361  
TITLE: Silver halide color photographic material  
having controlled spectral sensitivity  
distribution  
INVENTOR(S): Hosokawa, Junichiro; Sakurazawa, Mamoru  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11038568	A2	19990212 /	JP 1997-211178	1997 0723
PRIORITY APPLN. INFO.:				JP 1997-211178 1997 0723

AB In the title material possessing  $\geq 1$  blue-sensitive,  
 $\geq 1$  **green-sensitive**, and  $\geq 1$   
red-sensitive Ag halide emulsion layers containing yellow, magenta,  
and cyan couplers, resp., and  $\geq 1$  non-photosensitive layer  
on a support and satisfying the relations  $500 \text{ nm} < \lambda\text{-R} <$

560 nm and  $\lambda_G - \lambda_R \geq 10$  nm [ $\lambda_R$  = central wavelength in the spectral sensitivity distribution of the interlayer effect which all the red-sensitive layers undergo from the other emulsion layers in the range of 500-600 nm;  $\lambda_G$  = central wavelength in the spectral sensitivity distribution of  $\geq 1$  of the **green-sensitive** layers], the content of Ca in  $\geq 1$  of the constitutive layers is 4.0 + 10<sup>-3</sup>-8.0 + 10<sup>-2</sup> g/g gelatin in the layer. The material shows improved color reproducibility, storage stability, and latent image stability.

IT **106518-55-2 189702-75-8**

(spectral sensitivity distribution and calcium content-controlled photog. film)

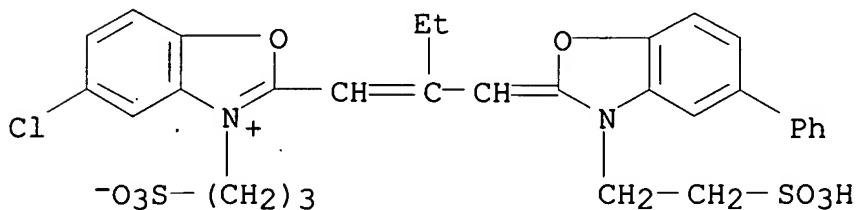
RN 106518-55-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 106518-54-1

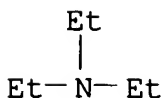
CMF C30 H29 Cl N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N

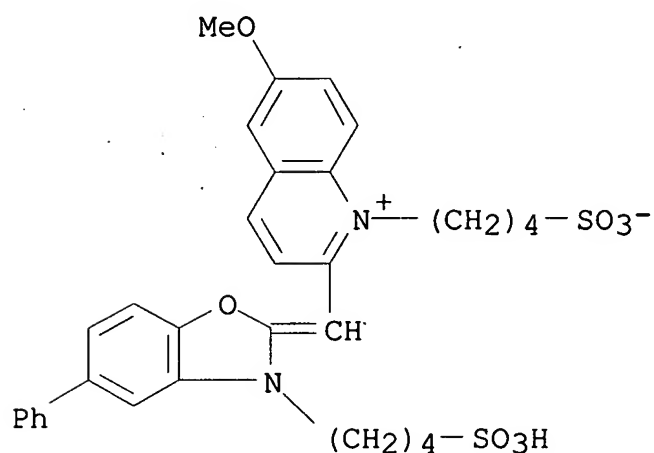


RN 189702-75-8 HCAPLUS  
 CN Quinolinium, 6-methoxy-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 189702-74-7

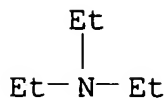
CMF C32 H34 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N

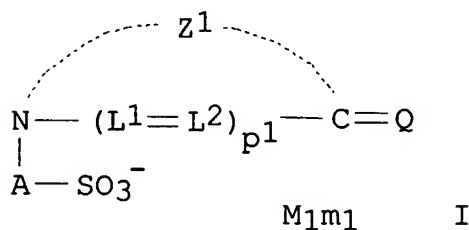


IC ICM G03C007-20  
 ICS G03C001-047; G03C007-00  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
 IT **106518-55-2 189702-75-8**  
 (spectral sensitivity distribution and calcium content-controlled photog. film)

L29 ANSWER 12 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:398596 HCAPLUS  
 DOCUMENT NUMBER: 129:101877  
 TITLE: Reduction-sensitized and spectrally sensitized  
 photographic films with excellent storage  
 stability  
 INVENTOR(S): Hioki, Takanori  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 10161264	A2	19980619	JP 1996-317837	1996 1128
US 5976779	A	19991102 /	US 1997-971124	1997 1120
PRIORITY APPLN. INFO.:			JP 1996-317837	A 1996 1128

GI



AB The films contain (i) reduction-sensitized granular Ag halides and  
 (ii) I (A = bivalent linkage containing ≥1 element other than  
 C; Z = 5- or 6-membered heterocycle; L<sub>1,2</sub> = methine; p = 0, 1; M =

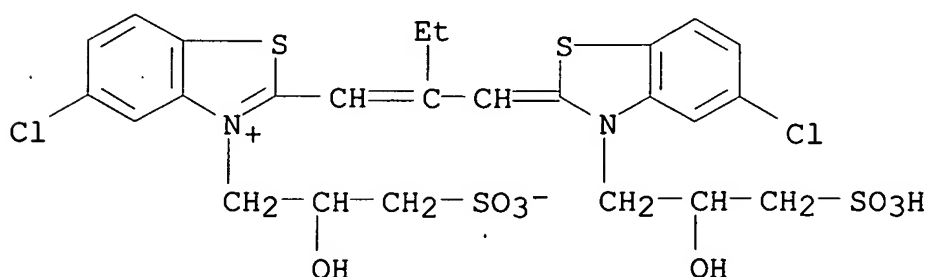
counter ion; m = 0-10 necessary to keep the electronic neutrality; Q = atomic groups forming methine dye). The films may include R101SO2SM101, R101SO2SR102, and/or R101SO2SEaSSO2R102 (R101-103 = aliphatic or aromatic groups, heterocycle; M101 = cations; E = bivalent linkages; a = 0, 1). The films may include transparent magnetic recording layers. The films provide low-fog photographs with high throughput. Thus, a Ag(Br, I) emulsion chemical sensitized by H<sub>2</sub>AuCl<sub>4</sub> and Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, then by N,N-dimethylselenourea and KSCN, and spectrally sensitized by 3-(1-sulfo-2-hydroxypropyl)-3'-sulfopropoxyethyl-5,5'-di-bromo-9-ethyl-benzo-oxacarbocyanine (Na salt) was used for the **green-sensitive** layer of a multilayer color neg. film.

IT 141714-93-4 209473-76-7 209473-77-8  
 209473-78-9 209473-79-0 209473-80-3  
 209473-81-4 209473-82-5 209473-83-6  
 209473-84-7 209473-85-8 209473-86-9  
 209473-87-0 209473-88-1 209473-90-5  
 209473-92-7

(sensitizer; photog. films containing reduction- and spectrally-sensitized emulsions with excellent storage stability)

RN 141714-93-4 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(2-hydroxy-3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(2-hydroxy-3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

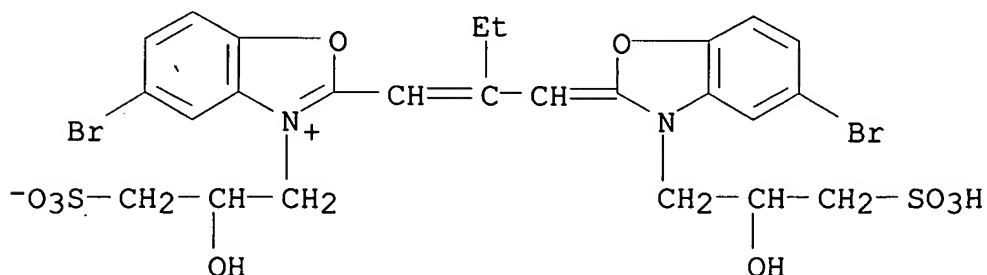


● Na

RN 209473-76-7 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(2-hydroxy-3-sulfopropyl)-

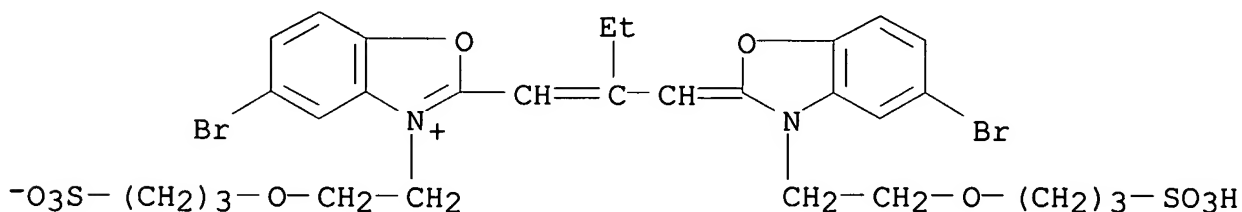
2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(2-hydroxy-3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 209473-77-8 HCAPLUS

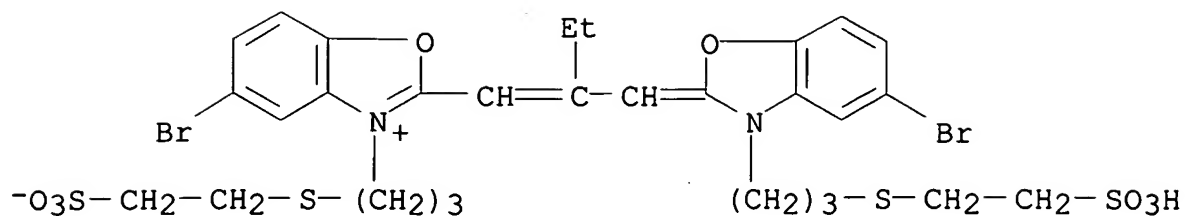
CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-[2-(3-sulfopropoxy)ethyl]-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-[2-(3-sulfopropoxy)ethyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 209473-78-9 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-[3-[(2-sulfoethyl)thio]propyl]-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-[3-[(2-sulfoethyl)thio]propyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

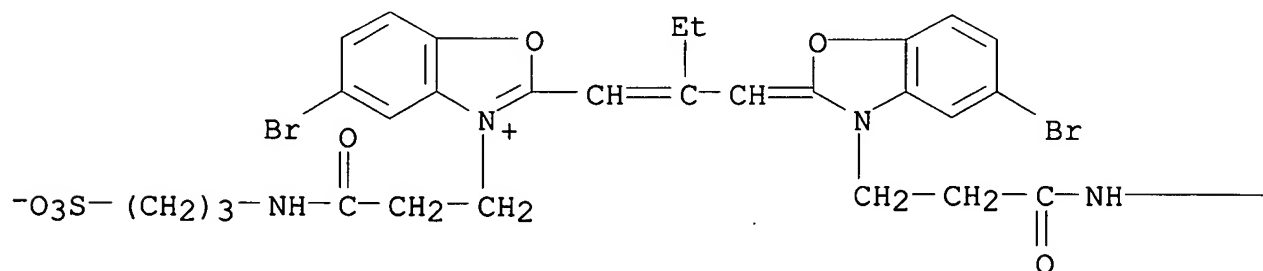


● Na

RN 209473-79-0 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-[3-oxo-3-[(3-sulfopropyl)amino]propyl]-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-[3-oxo-3-[(3-sulfopropyl)amino]propyl]-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na



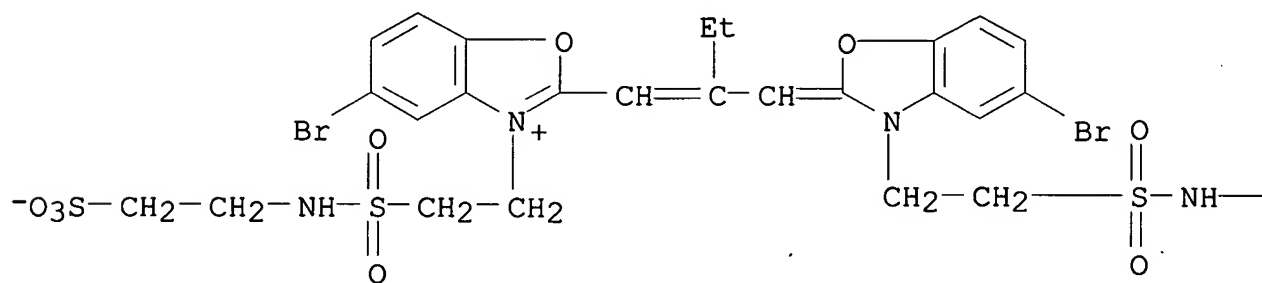
PAGE 1-B

— (CH<sub>2</sub>)<sub>3</sub>—SO<sub>3</sub>H

RN 209473-80-3 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-[2-[[ (2-sulfoethyl)amino]sulfonyl]ethyl]-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-[2-[[ (2-sulfoethyl)amino]sulfonyl]ethyl]-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

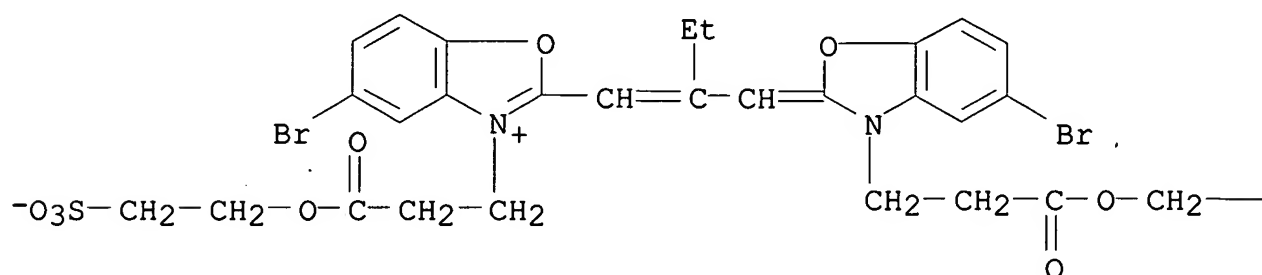
PAGE 1-B

—CH<sub>2</sub>—CH<sub>2</sub>—SO<sub>3</sub>H

RN 209473-81-4 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-[3-oxo-3-(2-sulfoethoxy)propyl]-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-[3-oxo-3-(2-sulfoethoxy)propyl]-, inner salt, sodium salt (9CI)  
(CA INDEX NAME)

PAGE 1-A



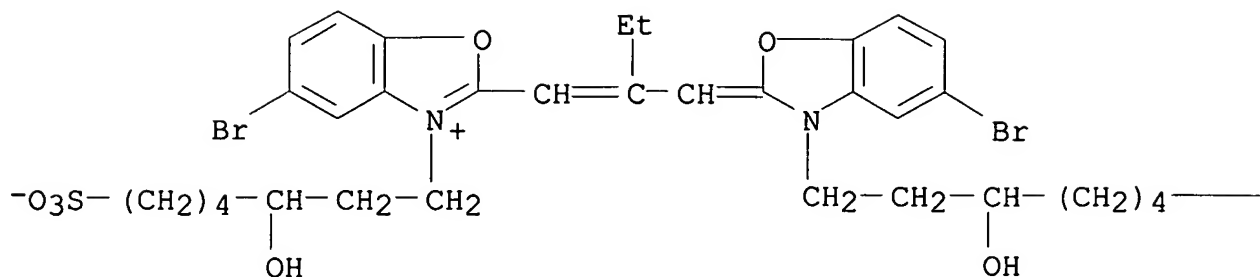
PAGE 1-B

—CH<sub>2</sub>—SO<sub>3</sub>H

RN 209473-82-5 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(3-hydroxy-7-sulfoheptyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-hydroxy-7-sulfoheptyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

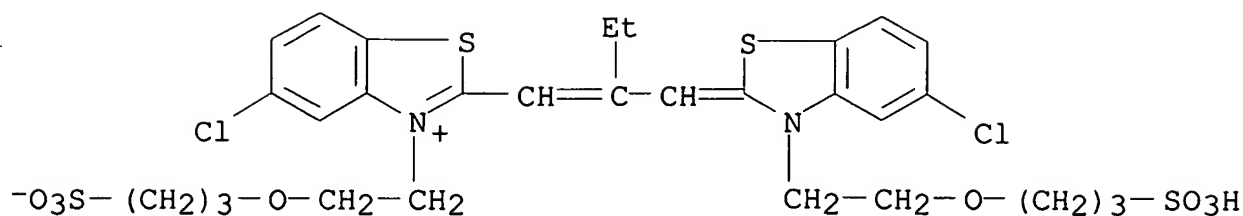
—  $\text{SO}_3\text{H}$ 

RN 209473-83-6 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-(3-sulfopropoxy)ethyl]-2(3H)-benzothiazolylydene]methyl]-1-butenyl]-3-[2-(3-sulfopropoxy)ethyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

USHA SHRESTHA

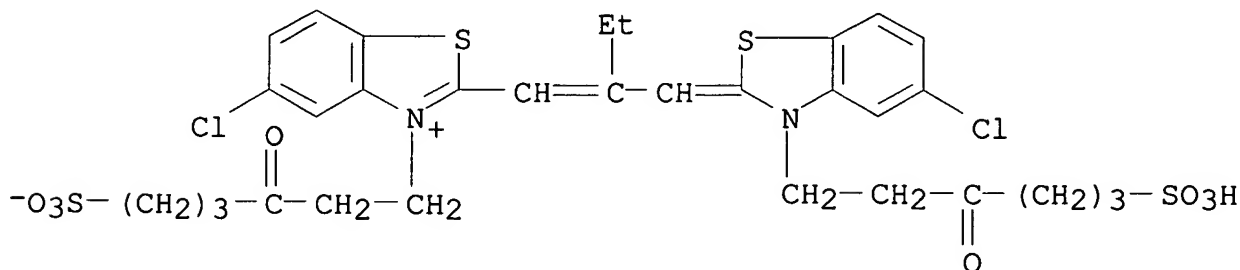
REM 4B28



● Na

RN 209473-84-7 HCAPLUS

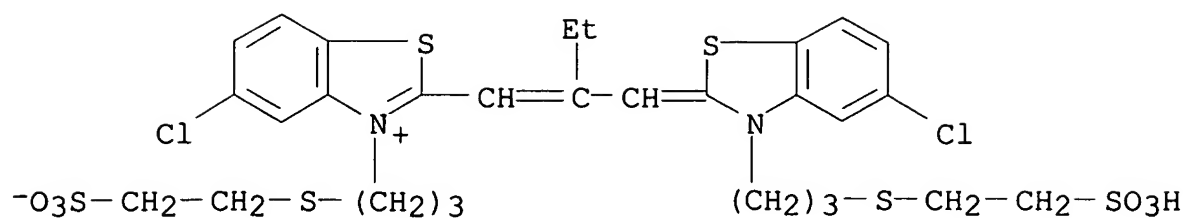
CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-oxo-6-sulfohexyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-oxo-6-sulfohexyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 209473-85-8 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[3-[(2-sulfoethyl)thio]propyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-[3-[(2-sulfoethyl)thio]propyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

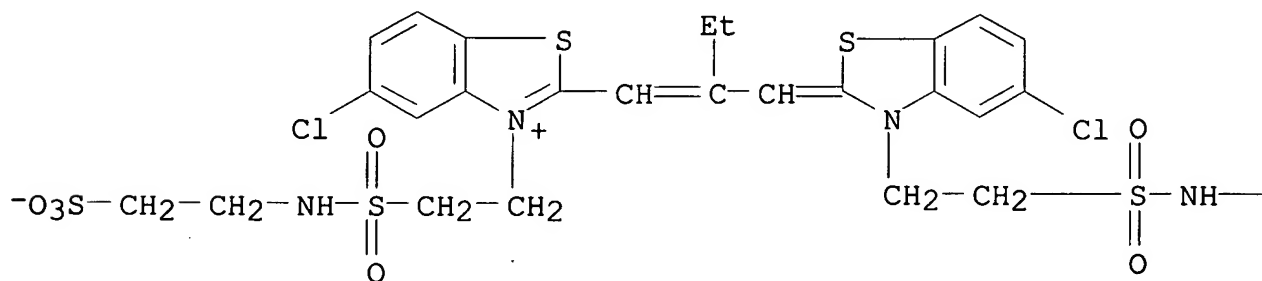


● Na

RN 209473-86-9 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-[[[(2-sulfoethyl)amino]sulfonyl]ethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-[2-[[[(2-sulfoethyl)amino]sulfonyl]ethyl]-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

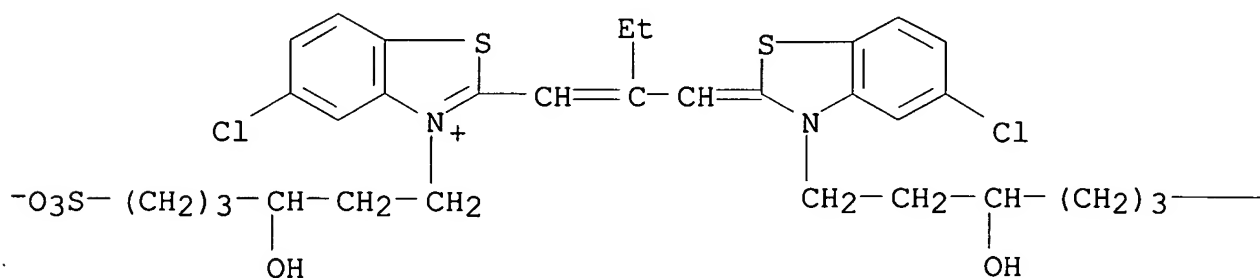
PAGE 1-B

—CH<sub>2</sub>—CH<sub>2</sub>—SO<sub>3</sub>H

RN 209473-87-0 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-hydroxy-6-sulfohexyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-hydroxy-6-sulfohexyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

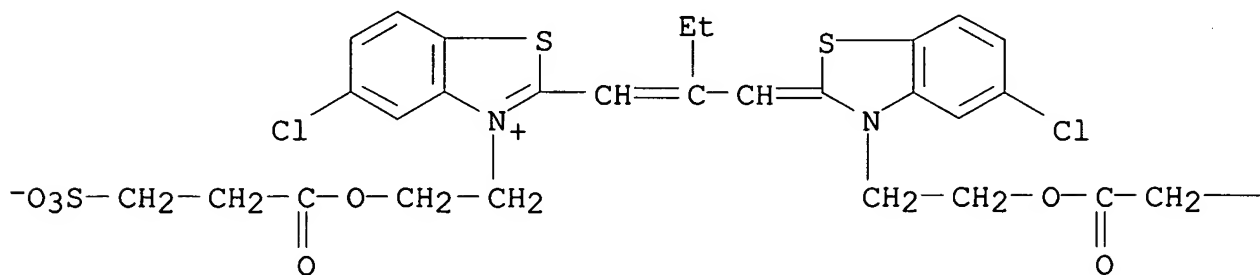
PAGE 1-B

—SO<sub>3</sub>H

RN 209473-88-1 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-(1-oxo-3-sulfopropoxy)ethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-[2-(1-oxo-3-sulfopropoxy)ethyl]-, inner salt, sodium salt (9CI)  
(CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

—CH<sub>2</sub>—SO<sub>3</sub>H

RN 209473-90-5 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(2-hydroxy-3-sulfopropyl)-2-[2-[[1-(2-hydroxy-3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1)  
(9CI) (CA INDEX NAME)

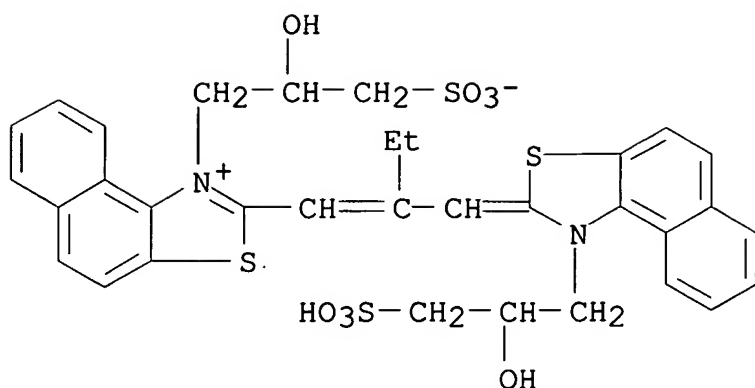
CM 1

CRN 209473-89-2

CMF C33 H32 N2 O8 S4

USHA SHRESTHA

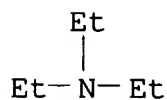
REM 4B28



CM 2

CRN 121-44-8

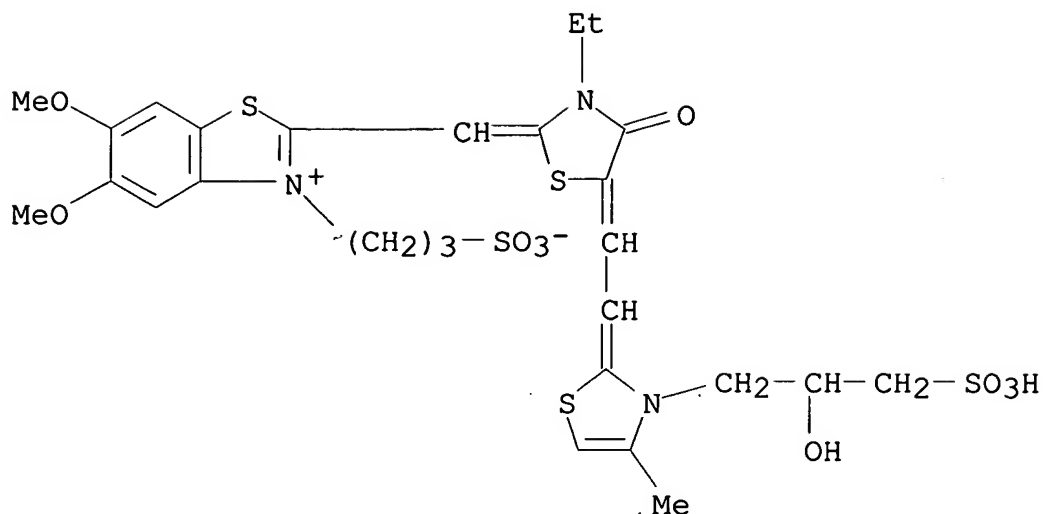
CMF C6 H15 N



RN 209473-92-7 HCAPLUS

CN Benzothiazolium, 2-[[3-ethyl-5-[[3-(2-hydroxy-3-sulfopropyl)-4-methyl-2(3H)-thiazolylidene]ethylidene]-4-oxo-2-thiazolidinylidene]methyl]-5,6-dimethoxy-3-(3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)





● Na

IC ICM G03C001-14  
ICS G03C001-00; G03C001-08; G03C001-22; G03C007-00  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 41  
IT 1887-29-2 **141714-93-4 209473-76-7**  
**209473-77-8 209473-78-9 209473-79-0**  
**209473-80-3 209473-81-4 209473-82-5**  
**209473-83-6 209473-84-7 209473-85-8**  
**209473-86-9 209473-87-0 209473-88-1**  
**209473-90-5 209473-91-6 209473-92-7**  
(sensitizer; photog. films containing reduction- and  
spectrally-sensitized emulsions with excellent storage  
stability)

L29 ANSWER 13 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:184456 HCAPLUS  
DOCUMENT NUMBER: 128:263892  
TITLE: Silver halide color photographic material  
spectrally sensitized by cyanine dyes  
INVENTOR(S): Tobita, Keisuke; Kumashiro, Kenji  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 45 pp.

USHA SHRESTHA REM 4B28

DOCUMENT TYPE:

CODEN: JKXXAF

LANGUAGE:

Patent

FAMILY ACC. NUM. COUNT:

Japanese

1

PATENT INFORMATION:

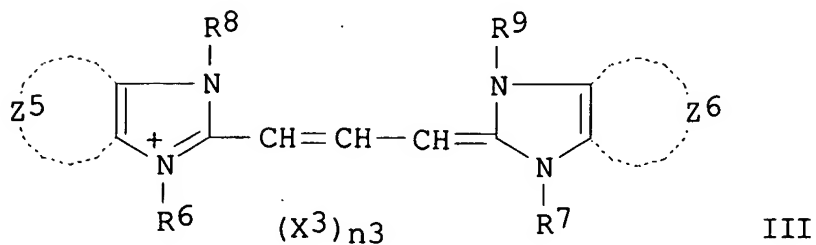
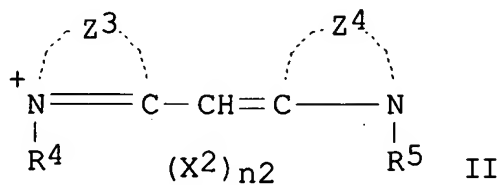
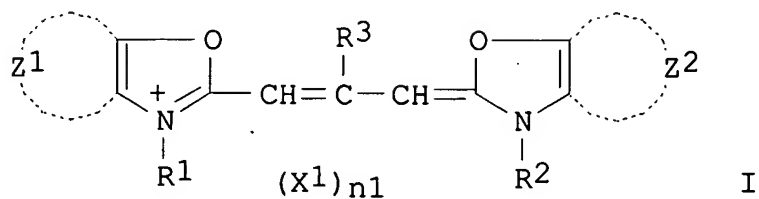
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10078627	A2	19980324	JP 1996-235231	1996 0905

PRIORITY APPLN. INFO.:

JP 1996-235231

1996  
0905

GI



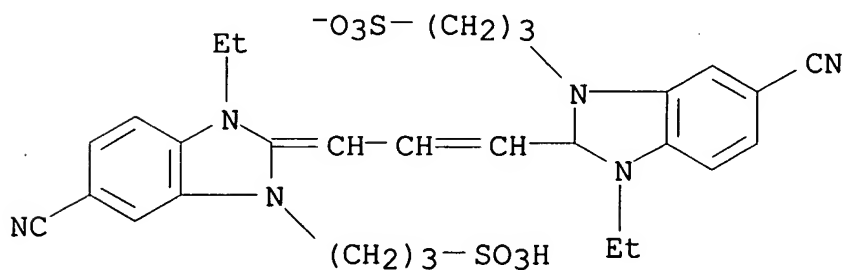
AB Claimed photog. material is characterized by that  $\geq 1$  emulsion layer is spectrally sensitized by the combination of oxacarbocyanine I, monomethyne-cyanine II and a imidacarbocyanine III, where R1-7 = alkyl, alkenyl; R4 = H, alkyl, aryl; R8, R9 = alkyl, alkenyl, aryl; Z1, Z2, Z5, Z6 = benzo; Z3, Z4 = a ring structure selected from picoline, pyridine, quinoline, indolenine, benzoazole, azole, etc, X1-3, n1-3 = counter ions and their number for electronic neutrality. It has high photog. speed and good latent image stability, consequently, it is suitable for camera-use films, such as multilayer color neg. films. Thus, the lowest speed layer among **green-sensitive** layer unit of a multilayer color neg. film spectrally was sensitized by 1,1'-di-methyl-3,3'-di-sulfopropyl-5,5'-di-cyano-benzoimidacarbocyanine, 3-ethyl-3'-sulfopropyl-5,5'-di-chloro-9-ethyl-benzooxacarbocyanine and 3-triethylaminosulfoethyl-3'-sulfopropyl-naphthothiacyanine. The film product had the mentioned advantages.

IT 33628-08-9 63148-90-3 75260-71-8  
94393-21-2 205194-94-1 205194-95-2  
205194-96-3

(dye; color photog. material spectrally sensitized by an oxacarbo-, imidacarbo-, and monomethyne cyanine dyes to improve latent image stability)

RN 33628-08-9 HCAPLUS

CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

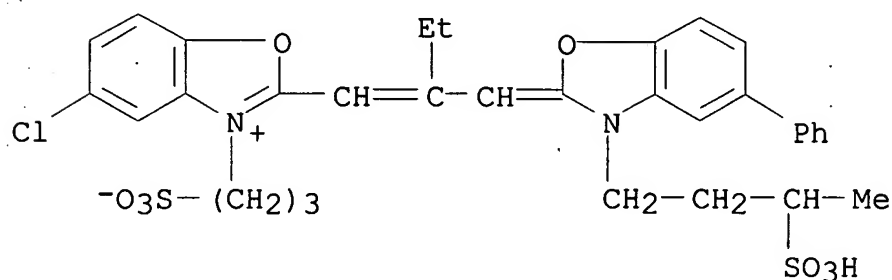
RN 63148-90-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 52049-36-2

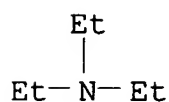
CMF C32 H33 Cl N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



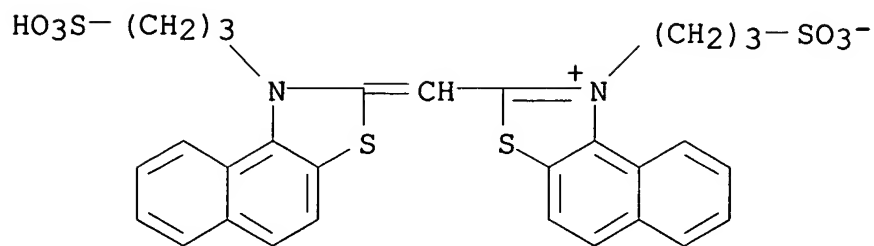
RN 75260-71-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70211-20-0

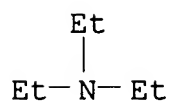
CMF C29 H26 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



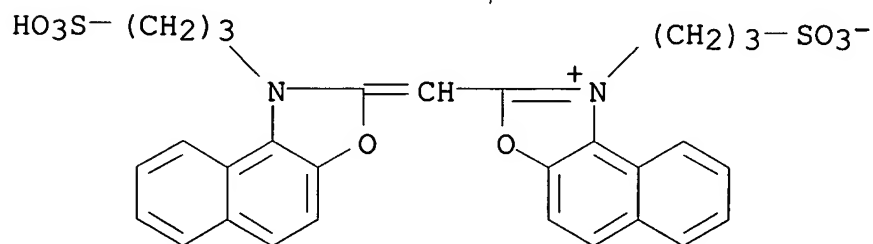
RN 94393-21-2 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 94393-20-1

CMF C29 H26 N2 O8 S2

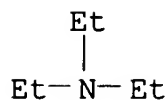


CM 2

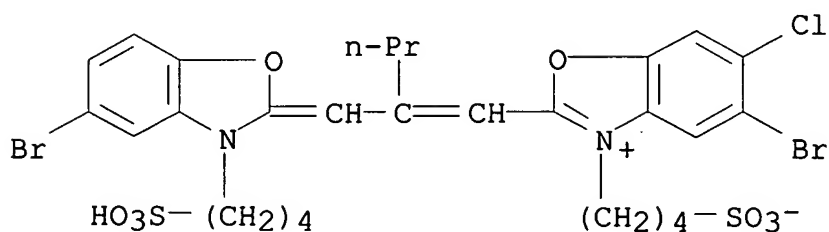
USHA SHRESTHA

REM 4B28

CRN 121-44-8  
CMF C6 H15 N

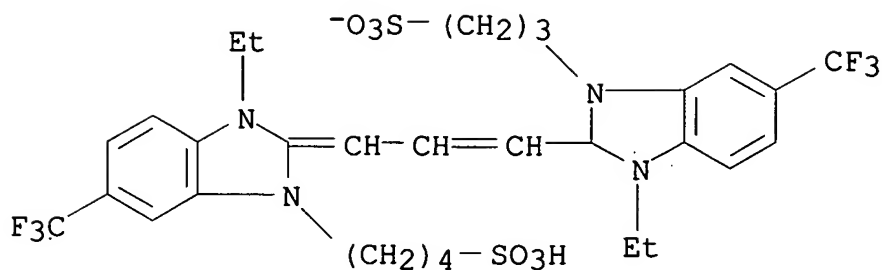


RN 205194-94-1 HCAPLUS  
CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-pentenyl]-6-chloro-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 205194-95-2 HCAPLUS  
CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

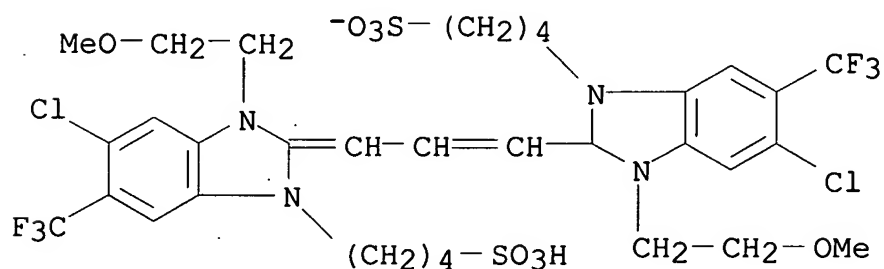


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 205194-96-3 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-1,3-dihydro-3-(2-methoxyethyl)-1-(4-sulfobutyl)-6-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(2-methoxyethyl)-1-(4-sulfobutyl)-6-(trifluoromethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC ICM G03C001-29

ICS G03C001-035; G03C001-16; G03C001-18; G03C007-00; G03C007-392

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 33628-08-9 63148-90-3 75260-71-8

94393-21-2 205194-94-1 205194-95-2

USHA SHRESTHA

REM 4B28

**205194-96-3**

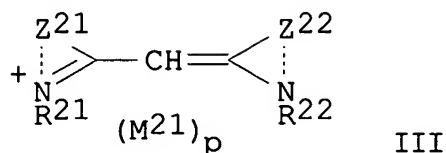
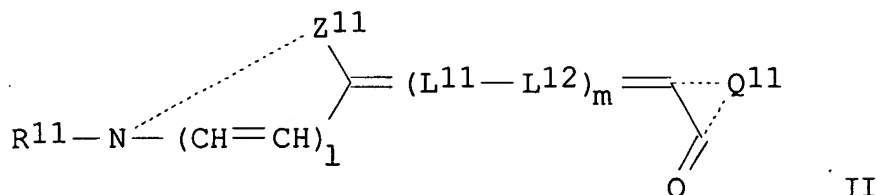
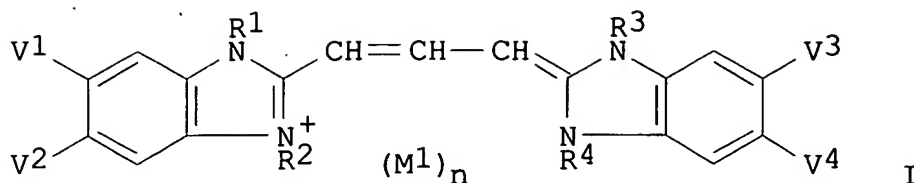
(dye; color photog. material spectrally sensitized by an oxacarbo-, imidacarbo-, and monomethyne cyanine dyes to improve latent image stability)

L29 ANSWER 14 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1995:712030 HCAPLUS  
DOCUMENT NUMBER: 123:97742  
TITLE: Silver halide photographic material  
INVENTOR(S): Kagawa, Nobuaki; Kita, Noryasu  
PATENT ASSIGNEE(S): Konishiroku Photo Ind, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 07036143	A2	19950207	JP 1993-181451	1993 0722
PRIORITY APPLN. INFO.:			JP 1993-181451	1993 0722

GI





AB A silver halide photog. material has high sensitivity in the green region and showing little staining due to residual sensitizing dyes after processing comprises  $\geq 1$  dye having the formula I [R1-4 = an aliphatic group with  $\geq 1$  of R2 and R4 being substituted by a water-soluble group; V1-4 = H, alkyl, alkoxy, aryl, halogen, carbamoyl, sulfamoyl, acylamino, alkoxy carbonyl, cyano, alkylsulfonyl, arylsulfonyl, acyl, or perfluoroalkyl; (M1)<sub>n</sub> = ions to neutralize the charge of the mol.],  $\geq 1$  dye having the formula II [Z11 = a nonmetallic atomic group necessary to form a 5-6-membered N-containing heterocyclic ring; Q11 = a 5-6-membered CO-containing carbonic or heterocyclic ring; R11 = an aliphatic group; L11, L12 = (substituted) methylene; m = 0 or 1], and  $\geq 1$  dye having the formula III [Z21, Z22 = a nonmetallic atomic group necessary to form a 5-membered N-containing heterocyclic ring; R21, R22 = an aliphatic group with  $\geq 1$  of R21 and R22 being substituted by a water-soluble group; (M21)<sub>p</sub> = ions to neutralize the charge of the mol.] and the silver halide grains occupying  $\geq 70\%$  of the projected area are tabular grains having an aspect ratio of  $\leq 1.20$ .

IT 28272-54-0 51588-61-5 51588-63-7  
 94393-23-4 165594-87-6 165594-88-7  
 165594-89-8 165594-90-1 165594-91-2  
 165594-92-3 165594-93-4 165594-94-5

165594-95-6 165594-96-7 165595-08-4

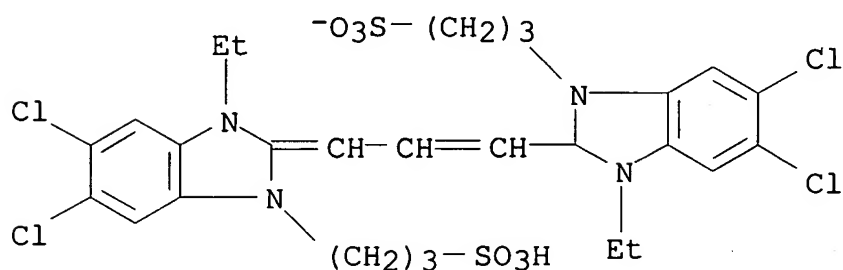
165595-09-5 165595-11-9 165595-12-0

165595-13-1

(silver halide photog. emulsion sensitizing dye compns. containing)

RN 28272-54-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

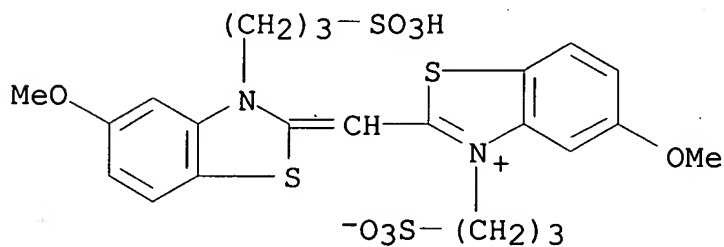


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 51588-61-5 HCAPLUS

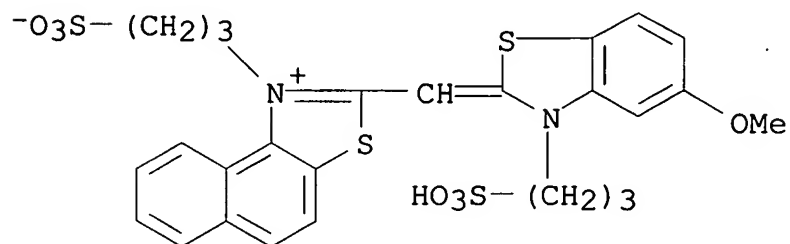
CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 51588-63-7 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

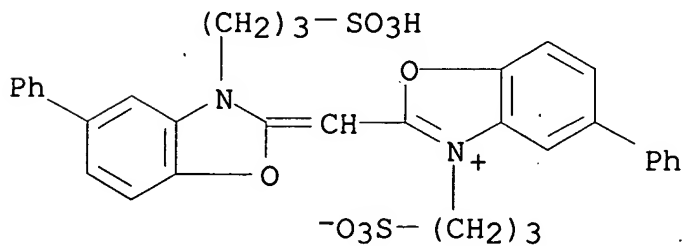
RN 94393-23-4 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 60507-44-0

CMF C33 H30 N2 O8 S2



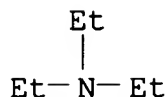
CM 2

CRN 121-44-8

CMF C6 H15 N

USHA SHRESTHA

REM 4B28



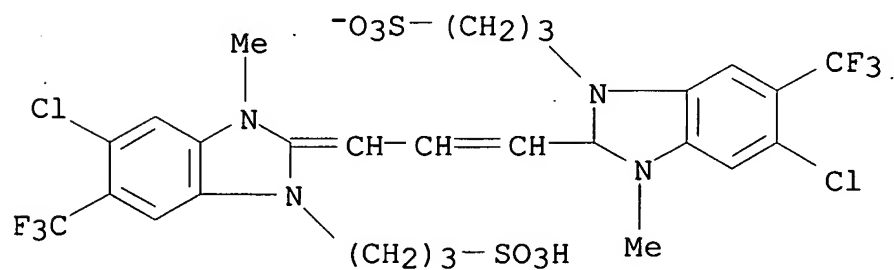
RN 165594-87-6 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-1,3-dihydro-3-methyl-1-(3-sulfopropyl)-6-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-methyl-1-(3-sulfopropyl)-6-(trifluoromethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 165594-86-5

CMF C27 H26 Cl2 F6 N4 O6 S2

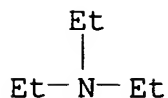


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 121-44-8

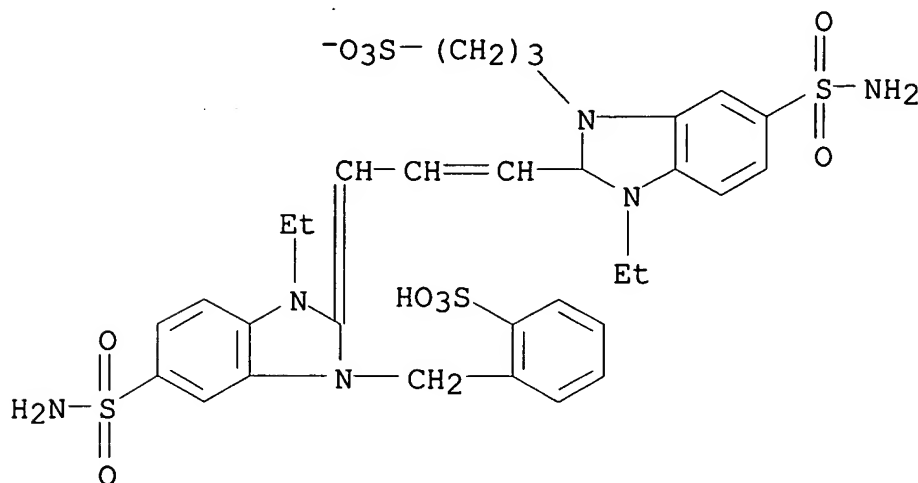
CMF C6 H15 N



RN 165594-88-7 HCAPLUS

CN 1H-Benzimidazolium, 5-(aminosulfonyl)-2-[3-[5-(aminosulfonyl)-1-

ethyl-1,3-dihydro-3-[(2-sulfophenyl)methyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

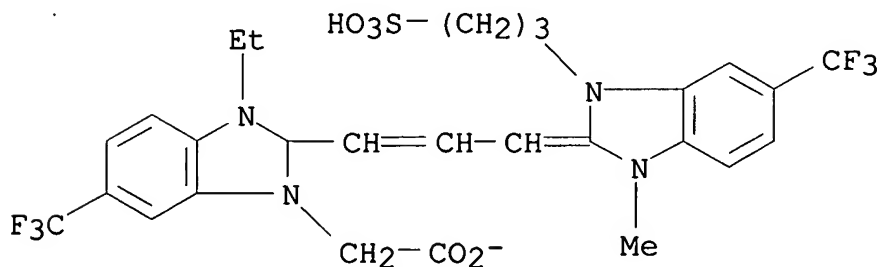


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-89-8 HCAPLUS

CN 1H-Benzimidazolium, 3-(carboxymethyl)-2-[3-[1,3-dihydro-1-methyl-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-5-(trifluoromethyl)-, inner salt (9CI) (CA INDEX NAME)



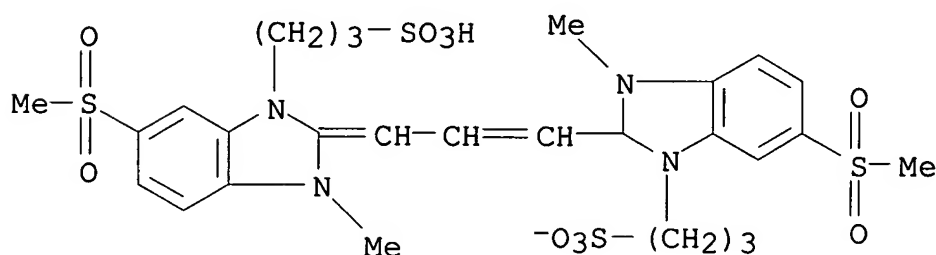
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-90-1 HCAPLUS

USHA SHRESTHA

REM 4B28

CN 1H-Benzimidazolium, 2-[3-[1,3-dihydro-1-methyl-5-(methylsulfonyl)-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-methyl-5-(methylsulfonyl)-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

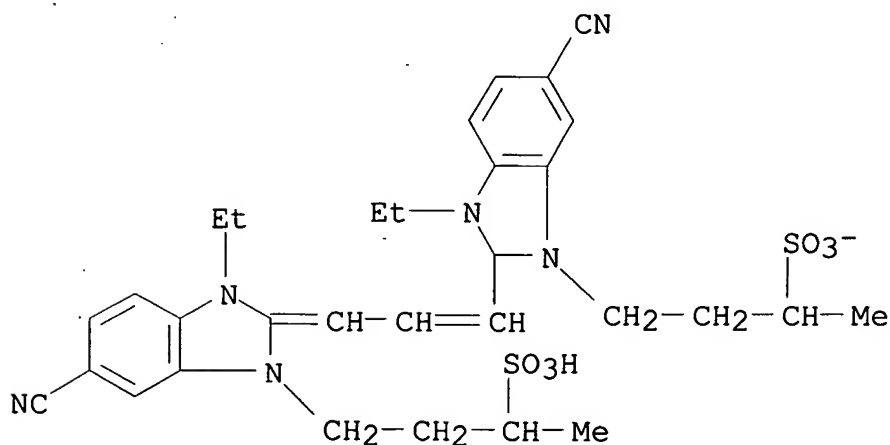


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-91-2 HCAPLUS

CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



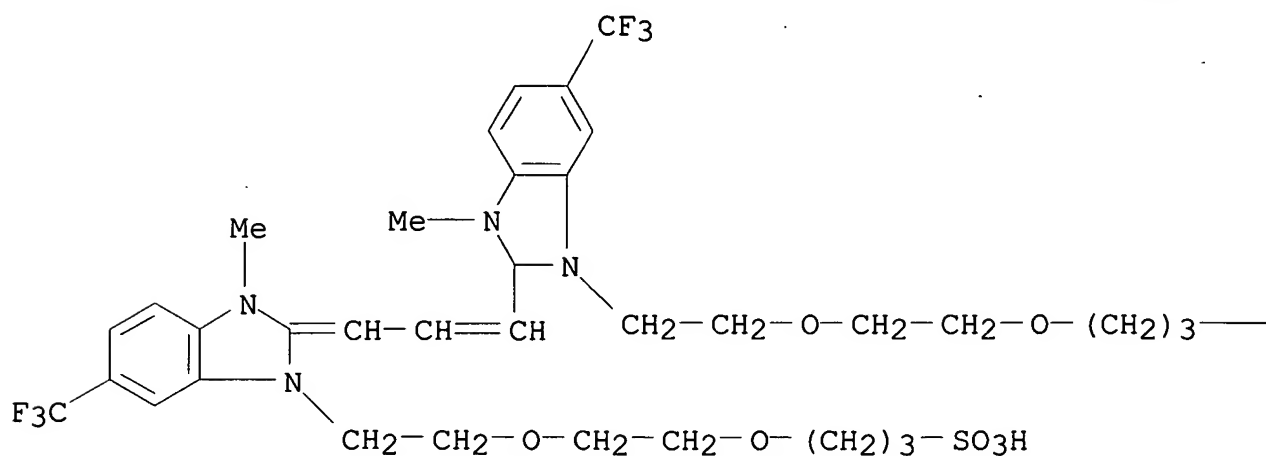
● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-92-3 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[1,3-dihydro-1-methyl-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-methyl-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

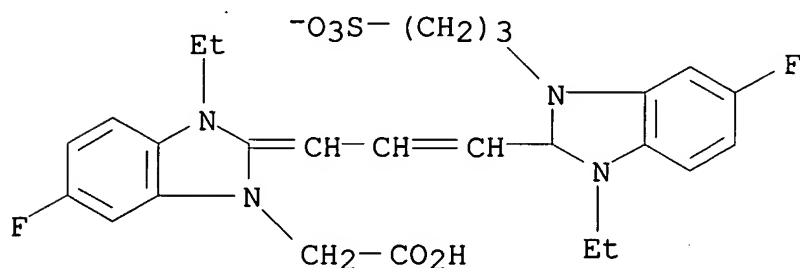
PAGE 1-B

—SO<sub>3</sub><sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-93-4 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[3-(carboxymethyl)-1-ethyl-5-fluoro-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-5-fluoro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

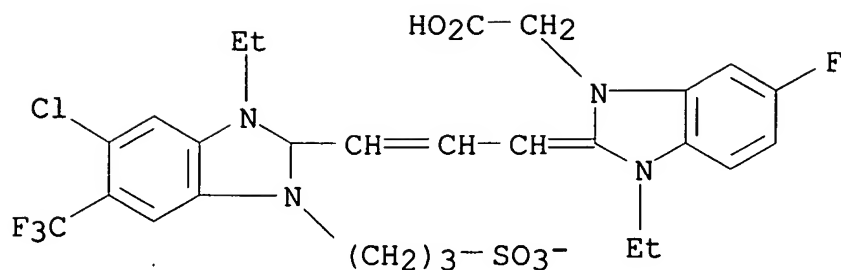


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-94-5 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[3-(carboxymethyl)-1-ethyl-5-fluoro-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-5-chloro-3-ethyl-1-(3-sulfopropyl)-6-(trifluoromethyl)-, inner salt (9CI) (CA INDEX NAME)

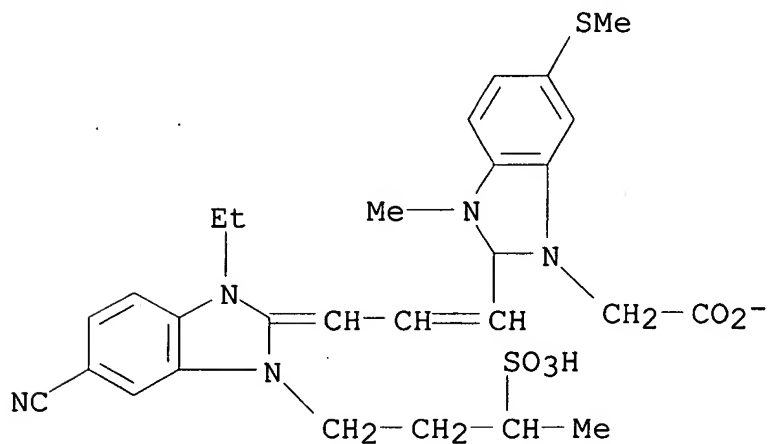




ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-95-6 HCAPLUS

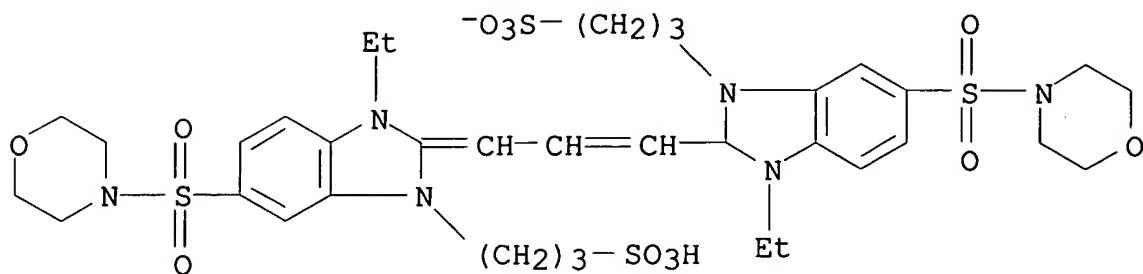
CN 1H-Benzimidazolium, 3-(carboxymethyl)-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-methyl-5-(methylthio)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 165594-96-7 HCAPLUS

CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-5-(4-morpholinylsulfonyl)-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-(4-morpholinylsulfonyl)-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

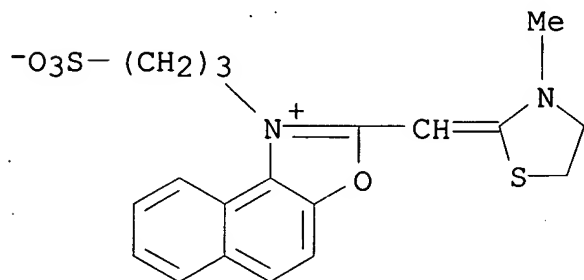


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

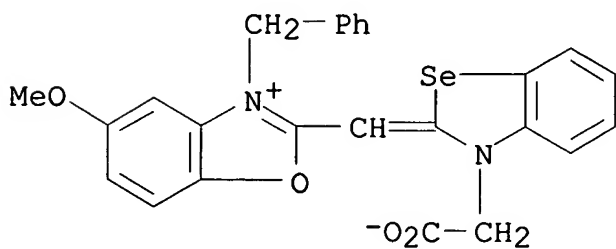
RN 165595-08-4 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[(3-methyl-2-thiazolidinylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 165595-09-5 HCAPLUS

CN Benzoxazolium, 2-[[3-(carboxymethyl)-2(3H)-benzoselenazolylidene)methyl]-5-methoxy-3-(phenylmethyl)-, inner salt (9CI) (CA INDEX NAME)



USHA SHRESTHA

REM 4B28

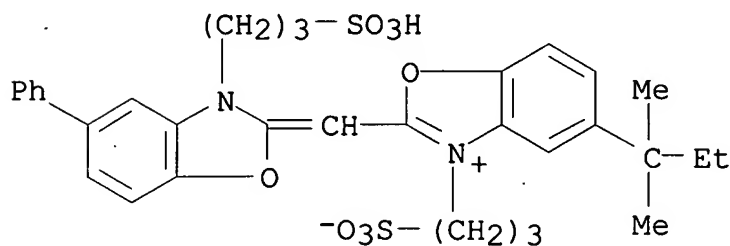
RN 165595-11-9 HCAPLUS

CN Benzoxazolium, 5-(1,1-dimethylpropyl)-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolyliidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 165595-10-8

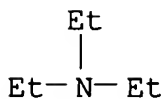
CMF C32 H36 N2 O8 S2



CM 2

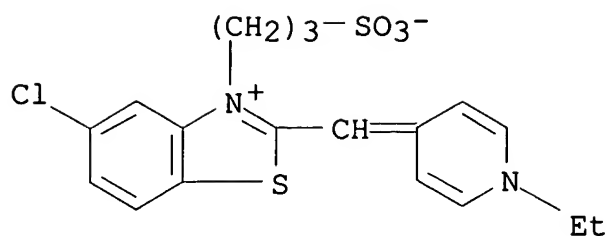
CRN 121-44-8

CMF C6 H15 N



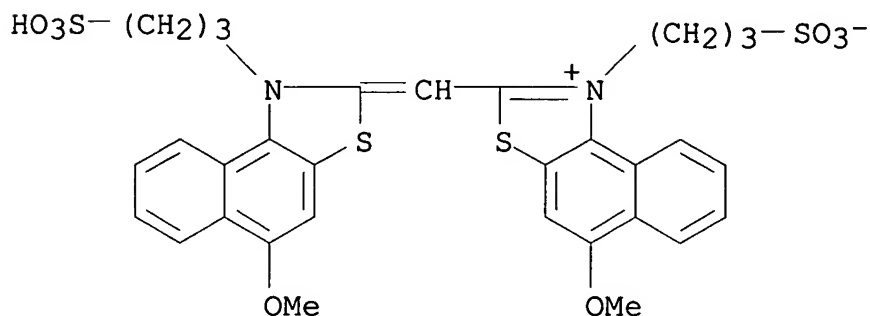
RN 165595-12-0 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[(1-ethyl-4(1H)-pyridinyliidene)methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 165595-13-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 5-methoxy-2-[[5-methoxy-1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM G03C001-12

ICS G03C001-00; G03C001-035; G03C001-29

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

ST silver halide photog material dye sensitizer; **green sensitive** silver halide photog material

IT Photographic emulsions

(containing tabular silver halide grains with improved **green sensitivity**)

IT **28272-54-0 51588-61-5 51588-63-7**

93446-32-3 **94393-23-4** 125563-88-4 **165594-87-6**

**165594-88-7 165594-89-8 165594-90-1**

**165594-91-2 165594-92-3 165594-93-4**

**165594-94-5 165594-95-6 165594-96-7**

165594-97-8 165594-98-9 165594-99-0 165595-00-6  
 165595-01-7 165595-02-8 165595-03-9 165595-05-1  
 165595-06-2 165595-07-3 **165595-08-4**  
**165595-09-5 165595-11-9 165595-12-0**  
**165595-13-1**

(silver halide photog. emulsion sensitizing dye compns. containing)

L29 ANSWER 15 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:605456 HCAPLUS  
 DOCUMENT NUMBER: 123:22014  
 TITLE: Silver halide color photographic material  
 INVENTOR(S): Uchida, Mitsuhiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 50 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 06332101	A2	19941202	JP 1993-119908	1993 0521

PRIORITY APPLN. INFO.: JP 1993-119908

1993  
0521

AB A silver halide color photog. material having improved color reproducibility and high color sensitivity comprises a **green-sensitive** silver halide emulsion layer color-sensitized by  $\geq 1$  each of quinoline dyes, trimethyleneoxacarbocyanine dyes, and trimethyleneoxathiacarbocyanine dyes and the photog. material comprises a silver halide emulsion containing cubic or tetradecahedral silver halide grains with  $\geq 70\%$  of them having the [100] plane.

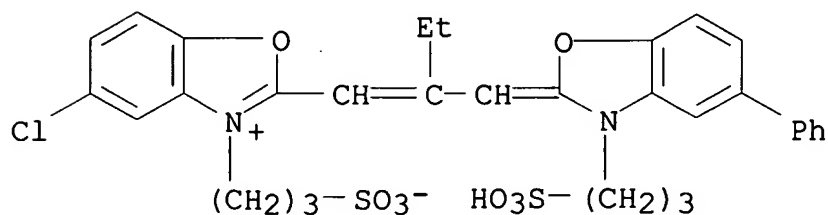
IT **67326-80-1 153504-64-4 157550-53-3**  
**157550-54-4 163709-19-1**

(**green-sensitive** silver halide photog.  
 emulsions sensitized by)

RN 67326-80-1 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-

benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

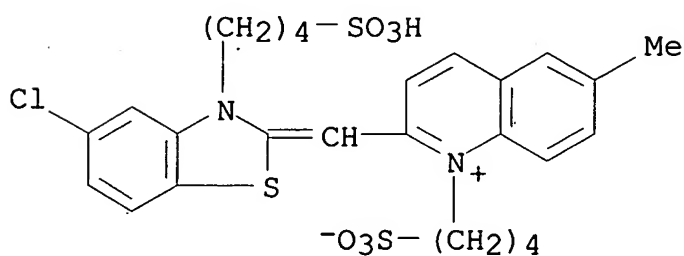


● Na

RN 153504-64-4 HCAPLUS  
 CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-methyl-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

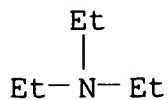
CM 1

CRN 153504-63-3  
 CMF C26 H29 Cl N2 O6 S3



CM 2

CRN 121-44-8  
 CMF C6 H15 N



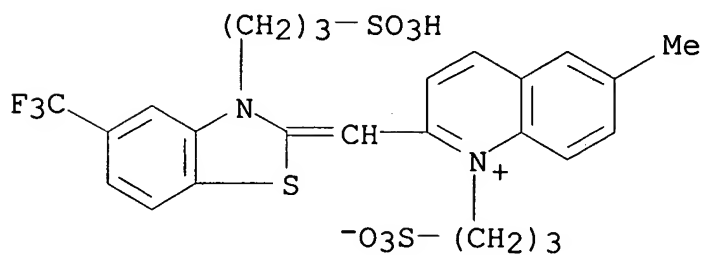
RN 157550-53-3 HCAPLUS

CN Quinolinium, 6-methyl-1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-5-(trifluoromethyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157550-52-2

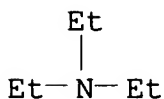
CMF C25 H25 F3 N2 O6 S3



CM 2

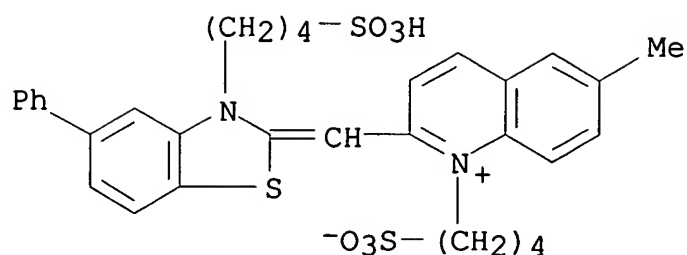
CRN 121-44-8

CMF C6 H15 N



RN 157550-54-4 HCAPLUS

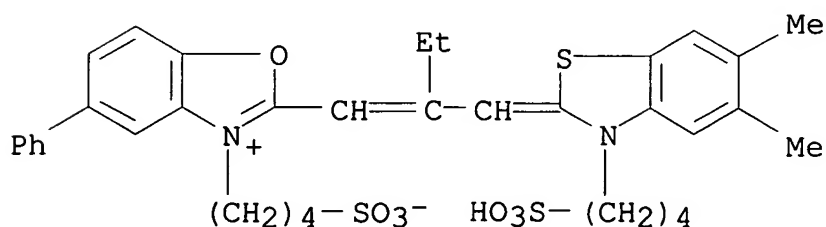
CN Quinolinium, 6-methyl-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 163709-19-1 HCAPLUS

CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C001-16

ICS G03C001-035; G03C001-18

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT Photographic emulsions  
(**green-sensitive**)

IT **67326-80-1 153504-64-4 157550-53-3**  
**157550-54-4 163709-19-1**

(**green-sensitive** silver halide photog.  
emulsions sensitized by)

L29 ANSWER 16 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:308727 HCAPLUS

DOCUMENT NUMBER: 122:92757

TITLE: Heat-developable color photographic material

USHA SHRESTHA REM 4B28



DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PRIORITY APPLN. INFO.: JP 1993-15345  
1993  
0202

USHA SHRESTHA      REM 4B28

IT 23216-66-2 59137-43-8 94009-92-4  
 98835-00-8 113436-96-7 148364-34-5  
 153504-64-4 157550-53-3 157550-54-4  
 157550-56-6 157550-59-9 157633-30-2  
 (spectral sensitizer dye; for **green-sensitive**  
 layer of heat-developable photog. material)

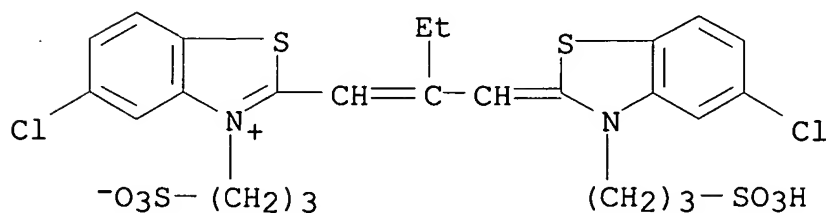
RN 23216-66-2 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-  
 benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner  
 salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 23568-98-1

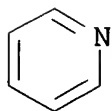
CMF C25 H26 Cl2 N2 O6 S4



CM 2

CRN 110-86-1

CMF C5 H5 N

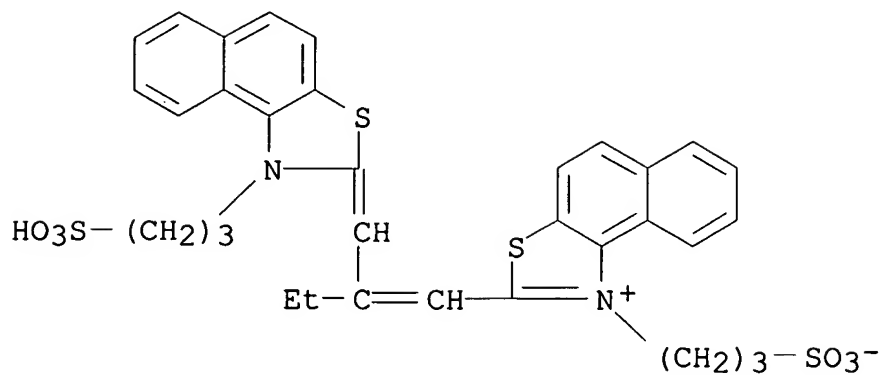


RN 59137-43-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-  
 sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-  
 , inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

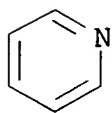
CM 1

CRN 4622-66-6  
CMF C33 H32 N2 O6 S4

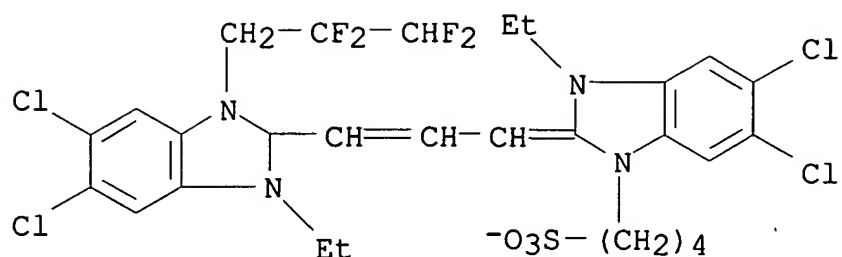


CM 2

CRN 110-86-1  
CMF C5 H5 N



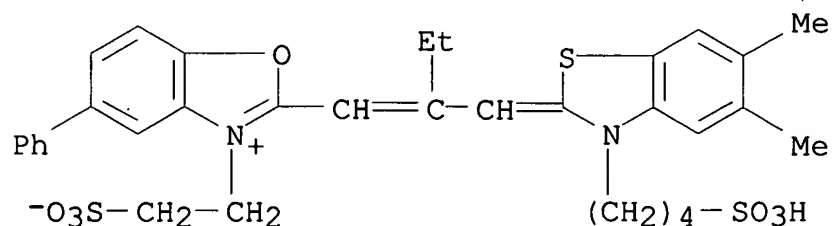
RN 94009-92-4 HCAPLUS  
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(2,2,3,3-tetrafluoropropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 98835-00-8 HCAPLUS

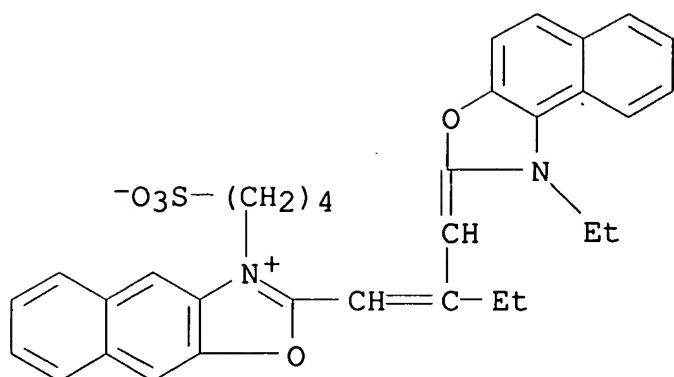
CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

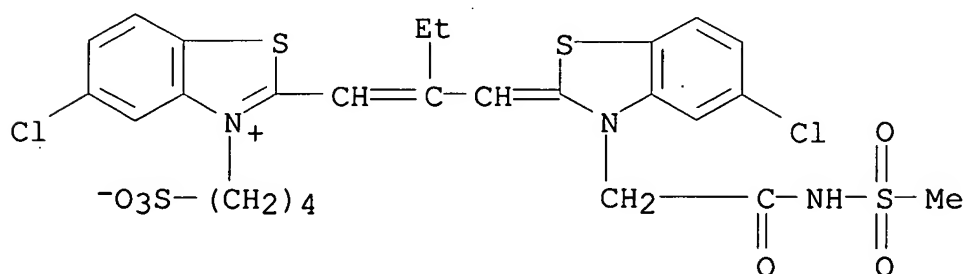
RN 113436-96-7 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 148364-34-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



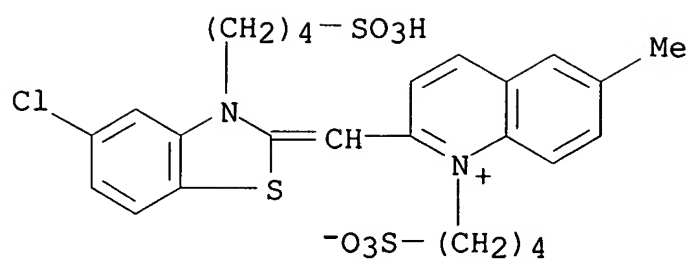
RN 153504-64-4 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-methyl-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 153504-63-3

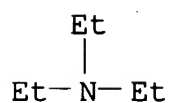
CMF C26 H29 Cl N2 O6 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



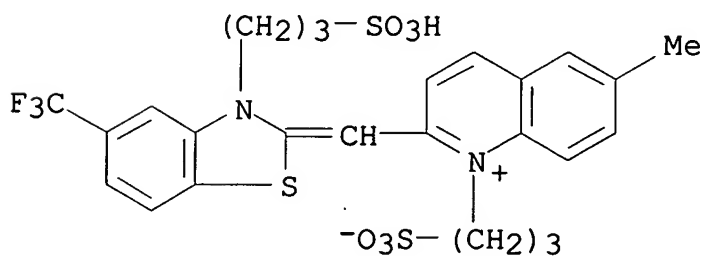
RN 157550-53-3 HCAPLUS

CN Quinolinium, 6-methyl-1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-5-(trifluoromethyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

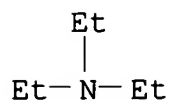
CRN 157550-52-2

CMF C25 H25 F3 N2 O6 S3

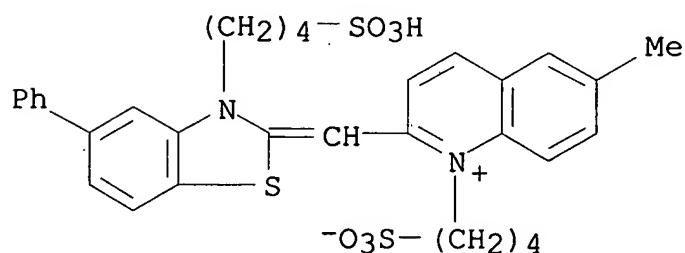


CM 2

CRN 121-44-8  
CMF C6 H15 N



RN 157550-54-4 HCAPLUS  
CN Quinolinium, 6-methyl-2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

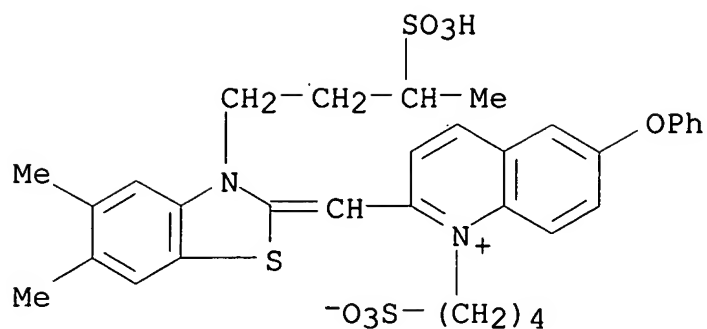


● Na

RN 157550-56-6 HCAPLUS  
CN Quinolinium, 2-[[5,6-dimethyl-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-phenoxy-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

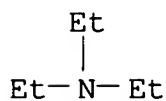
CRN 157550-55-5  
CMF C33 H36 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



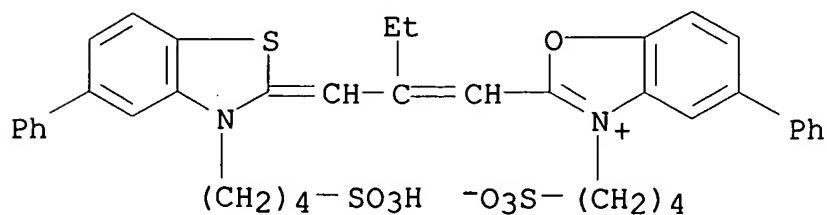
RN 157550-59-9 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157550-58-8

CMF C39 H40 N2 O7 S3



USHA SHRESTHA

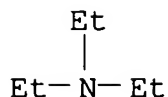
REM 4B28



CM 2

CRN 121-44-8

CMF C6 H15 N



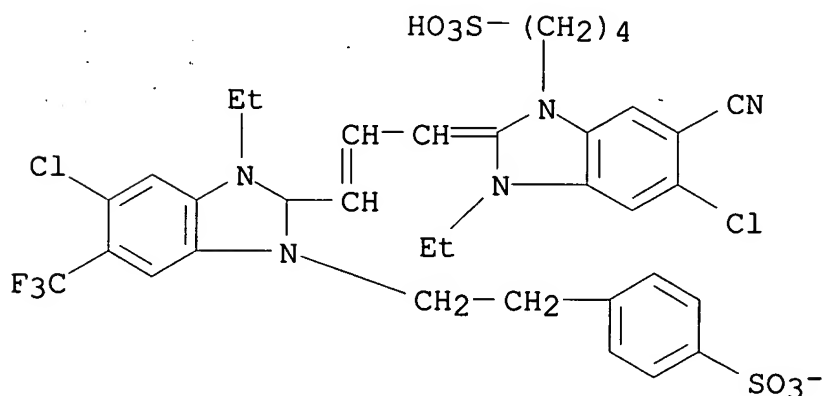
RN 157633-30-2 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-1-[2-(4-sulfophenyl)ethyl]-6-(trifluoromethyl)-, inner salt, compd. with 2,3,4,6,7,8,9,10-octahydropyrimido[1,2-a]azepine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 93031-05-1

CMF C35 H34 Cl2 F3 N5 O6 S2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

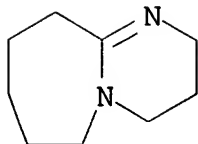
CM 2

CRN 6674-22-2

CMF C9 H16 N2

USHA SHRESTHA

REM 4B28



IC ICM G03C008-40  
 ICS G03C008-40; G03C001-498  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT Photographic sensitizers  
 (dye; for improved shortwave-side **green**  
**sensitivity**)  
 IT Photographic paper  
 (with improved shortwave side **green**  
**sensitivity**)  
 IT 23216-66-2 59137-43-8 94009-92-4  
 98835-00-8 113436-96-7 148364-34-5  
 153504-64-4 157550-53-3 157550-54-4  
 157550-56-6 157550-59-9 157633-30-2  
 (spectral sensitizer dye; for **green-sensitive**  
 layer of heat-developable photog. material)

L29 ANSWER 17 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:566805 HCAPLUS  
 DOCUMENT NUMBER: 121:166805  
 TITLE: Silver halide color photographic materials  
 with increased spectral sensitivity in short  
 wavelength side of green regions  
 INVENTOR(S): Nishigaki, Junji; Ueda, Fuminori; Ikegawa,  
 Akihiko  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28

JP 05313283 A2 19931126 JP 1992-144981

1992  
0512

US 5391475 A 19950221' US 1993-56782

1993  
0504

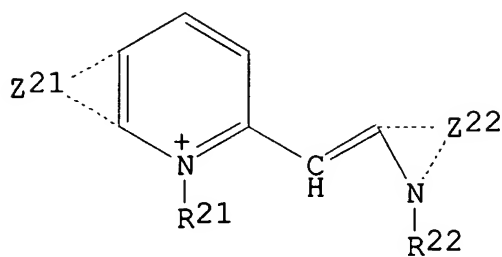
PRIORITY APPLN. INFO.:

JP 1992-144981

A

1992  
0512

GI

(X21)<sub>m</sub><sup>-</sup> I

AB The title photog. materials are sensitized by  $\geq 1$  Se compound Z11Z12Z13P:Se [Z11-13 = alkyl, aryl, heterocyclyl, halo, H, OR11, NR12(R13), SR14, SeR15; R11,14,15 = alkyl, aryl, heterocyclyl, H, cation; R12,13 = alkyl, aryl, heterocyclyl, H], and a **green-sensitive** Ag halide emulsion layer is spectrally sensitized with  $\geq 1$  dye represented by I [R21,22 = alkyl; Z21 = atomic group forming benzene ring; Z22 = atomic group forming benzothiazole or benzoselenazole ring; X21 = counter ion; m = 0, 1; m = 0, when inner complex salt is formed]. The photog. material exhibited excellent storage stability.

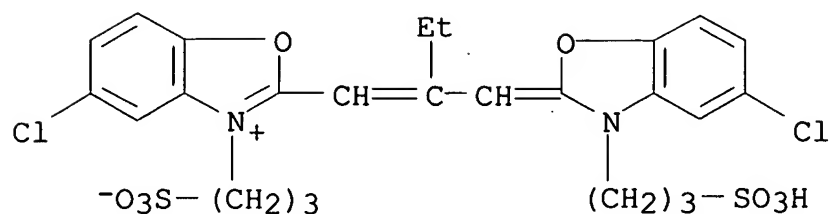
IT 18360-25-3 23216-66-2 94009-92-4  
113436-96-7 148364-34-5 153504-64-4  
153575-30-5 157633-24-4 157633-26-6  
157633-27-7 157633-28-8 157633-30-2

(silver halide photog. emulsion layer containing)

RN 18360-25-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner

salt, sodium salt (9CI) (CA INDEX NAME)



● Na

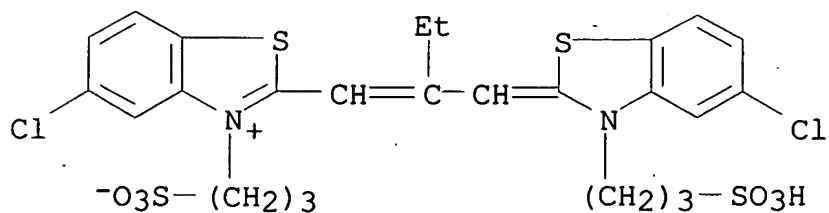
RN 23216-66-2 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 23568-98-1

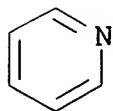
CMF C25 H26 Cl2 N2 O6 S4



CM 2

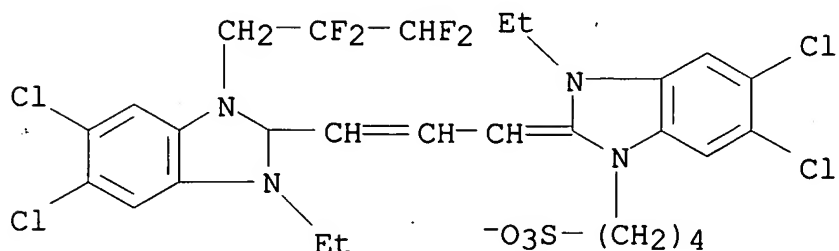
CRN 110-86-1

CMF C5 H5 N



RN 94009-92-4 HCAPLUS

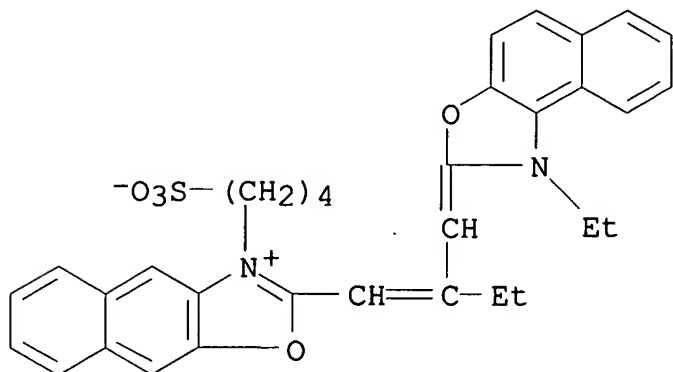
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(2,2,3,3-tetrafluoropropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

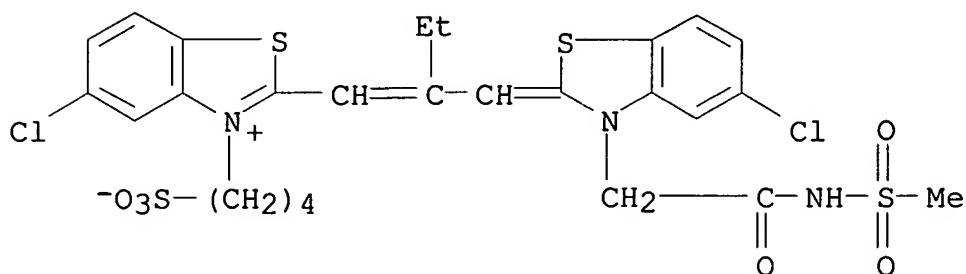
RN 113436-96-7 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 148364-34-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



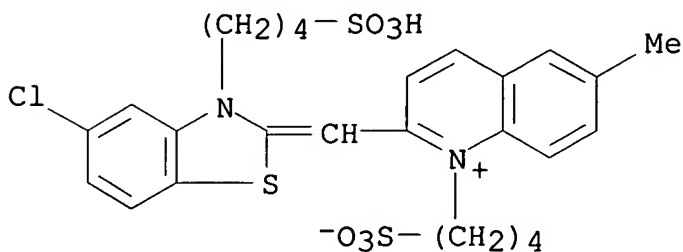
RN 153504-64-4 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-methyl-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 153504-63-3

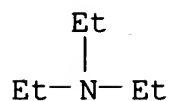
CMF C26 H29 Cl N2 O6 S3



CM 2

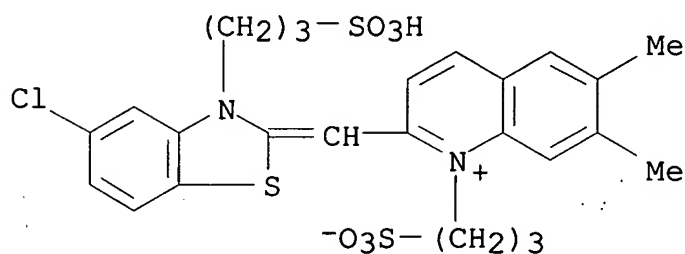
CRN 121-44-8

CMF C6 H15 N



RN 153575-30-5 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-6,7-dimethyl-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

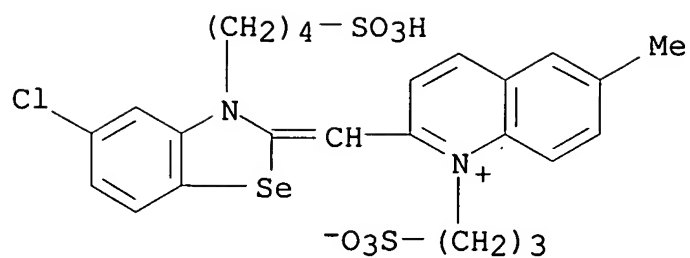
RN 157633-24-4 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzoselenazolylidene]methyl]-6-methyl-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157633-23-3

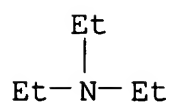
CMF C25 H27 Cl N2 O6 S2 Se



CM 2

CRN 121-44-8

CMF C6 H15 N



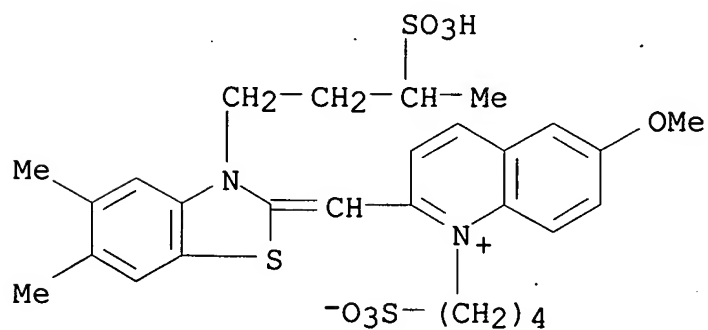
RN 157633-26-6 HCAPLUS

CN Quinolinium, 2-[[5,6-dimethyl-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-methoxy-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157633-25-5

CMF C28 H34 N2 O7 S3



USHA SHRESTHA

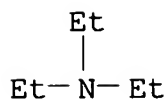
REM 4B28



CM 2

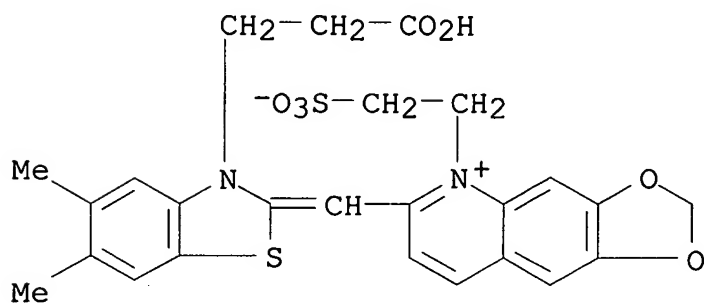
CRN 121-44-8

CMF C6 H15 N



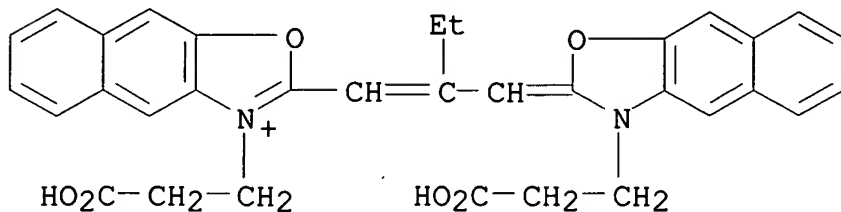
RN 157633-27-7 HCAPLUS

CN 1,3-Dioxolo[4,5-g]quinolinium, 6-[[3-(2-carboxyethyl)-5,6-dimethyl-2(3H)-benzothiazolylidene]methyl]-5-(2-sulfoethyl)-, inner salt  
(9CI) (CA INDEX NAME)



RN 157633-28-8 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(2-carboxyethyl)-2-[2-[[3-(2-carboxyethyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-  
(9CI) (CA INDEX NAME)



RN 157633-30-2 HCAPLUS

USHA SHRESTHA

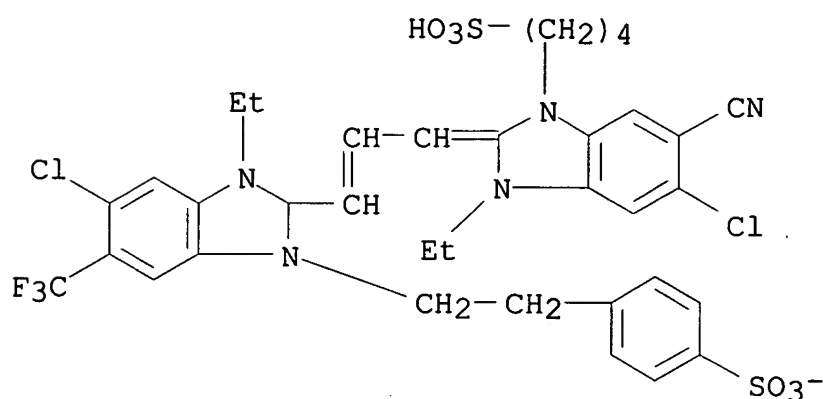
REM 4B28

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-1-[2-(4-sulfophenyl)ethyl]-6-(trifluoromethyl)-, inner salt, compd. with 2,3,4,6,7,8,9,10-octahydropyrimido[1,2-a]azepine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 93031-05-1

CMF C35 H34 Cl2 F3 N5 O6 S2

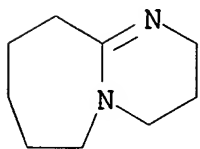


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 6674-22-2

CMF C9 H16 N2



IC ICM G03C001-09

ICS G03C001-14; G03C001-16; G03C001-18; G03C007-00

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

ST silver halide color photog material; selenium compd photog sensitizer; **green sensitive** photog emulsion layer

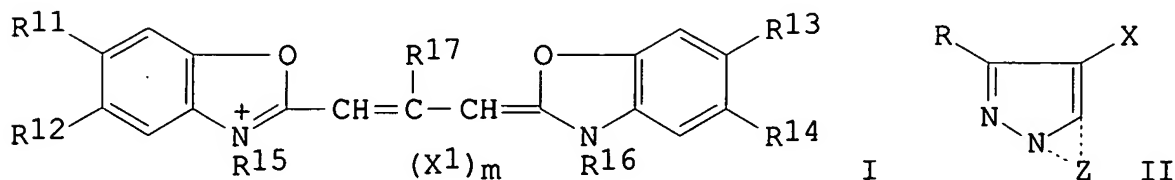
IT Photographic emulsions  
(color, **green-sensitive**, with increased sensitivity)

IT **18360-25-3 23216-66-2 94009-92-4**  
**113436-96-7 148364-34-5 153504-64-4**  
**153575-30-5 157633-24-4 157633-26-6**  
**157633-27-7 157633-28-8 157633-30-2**  
(silver halide photog. emulsion layer containing)

L29 ANSWER 18 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1994:495805 HCAPLUS  
DOCUMENT NUMBER: 121:95805  
TITLE: Silver halide color photographic material  
INVENTOR(S): Ueda, Fuminori; Nishigaki, Junji  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05241284	A2	19930921	JP 1992-78927	1992 0228
PRIORITY APPLN. INFO.: JP 1992-78927				1992 0228

GI



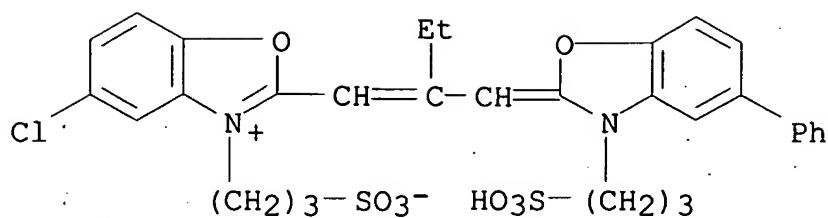
AB A color silver halide photog. material possesses on a support at least each one of a yellow color coupler-containing **green-sensitive** silver halide emulsion layer, a cyan coupler-containing red-sensitive silver halide emulsion layer, and a silver emulsion layer giving interlayer effect to the latter red-sensitive layer which is spectrally sensitized by a sensitizing dye. The spectral sensitizing dye is represented by a cyanine dye (I; R11 - R14 = H, alkyl, aryl, aralkyl, alkoxy, aryloxy, halo, aryloxycarbonyl, alkoxycarbonyl, NH2, cyano, CONH2, CO2H, acyloxy; R11 and R12 or R13 and R14 do not simultaneously represent H; R15, R16 = alkyl, aralkyl; R17 = C<sub>≥3</sub> alkyl, aryl, aralkyl; X1 = counter anion; m = 0,1; when an inner is formed, m = 0). A plural number of silver halide emulsion layers giving interlayer effect are present in the photog. material, at least two of which possess silver halide grains with different average grain sizes wherein the silver halide emulsion layer with larger average grain size contains less development inhibitor-releasing compound per 1 mol silver halide than the silver halide emulsion layer with smaller average grain size. At least one of silver halide emulsion layers giving interlayer effect contains a development inhibitor-releasing compound [II; R = H, substituent; Z = a group of nonmetal atoms required to form an (un)substituted azole ring containing 2-4 N atoms; X = a group becoming a development inhibitor or its precursor after being cleaved by coupling reaction with an oxidized form of a developing agent and optionally reacting further with another mol. of the oxidized form of a developing agent]. This color photog. material uses spectral sensitizers which strongly absorb light at 500-560 nm in the silver halide emulsion layer giving interlayer effect to the red-sensitive layer and provides high chromaticness and excellent color reproduction and graininess.

IT 67326-80-1 119105-68-9 123820-83-7  
 153575-29-2 156534-96-2 156534-98-4  
 156534-99-5 156535-00-1 156535-02-3

(photog. spectral sensitizer, color photog. film with silver halide emulsion layer containing, for interlayer effect in red-sensitive silver halide layer)

RN 67326-80-1 HCAPLUS

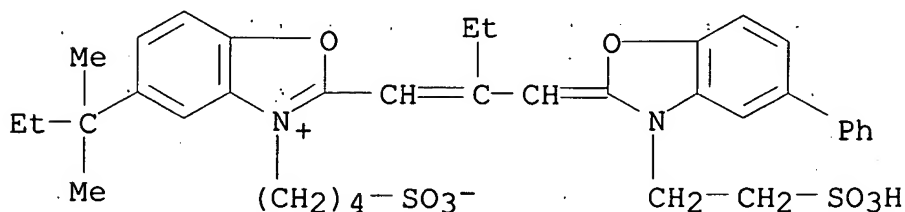
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 119105-68-9 HCAPLUS

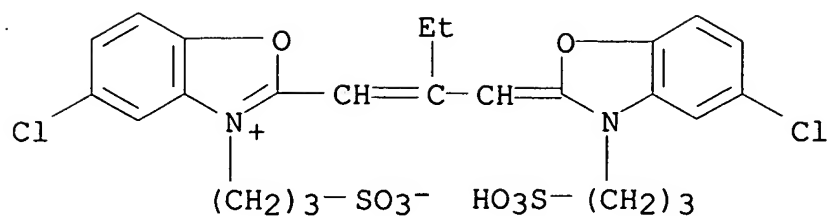
CN Benzoxazolium, 5-(1,1-dimethylpropyl)-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 123820-83-7 HCAPLUS

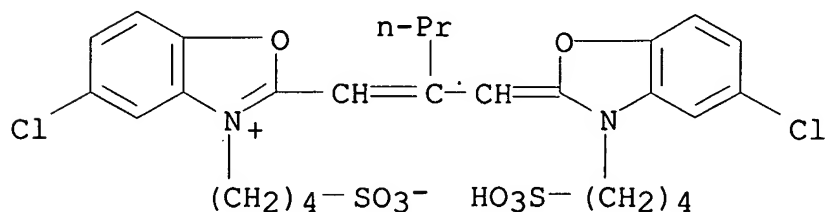
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 153575-29-2 HCAPLUS

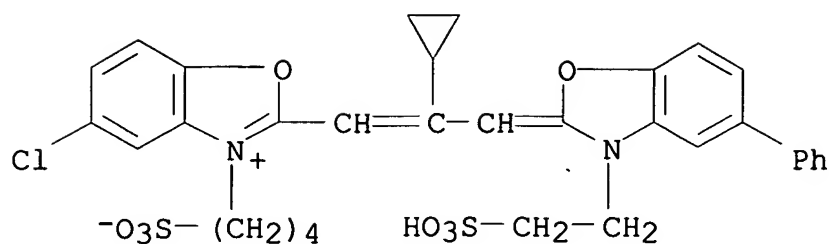
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-pentenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 156534-96-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-cyclopropyl-3-[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

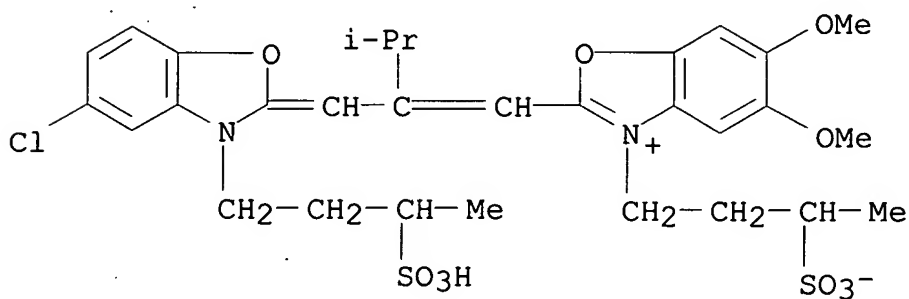
RN 156534-98-4 HCAPLUS

CN Benzoxazolium, 2-[2-[[5-chloro-3-(3-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-3-methyl-1-butenyl]-5,6-dimethoxy-3-(3-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 156534-97-3

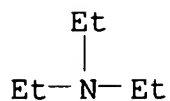
CMF C30 H37 Cl N2 O10 S2



CM 2

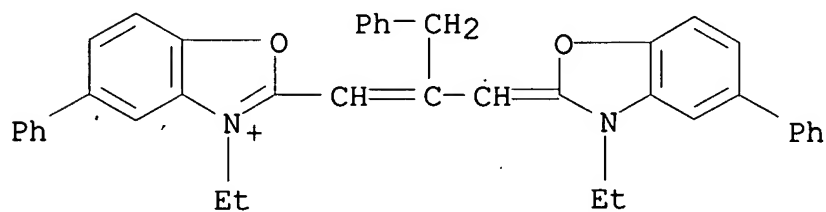
CRN 121-44-8

CMF C6 H15 N



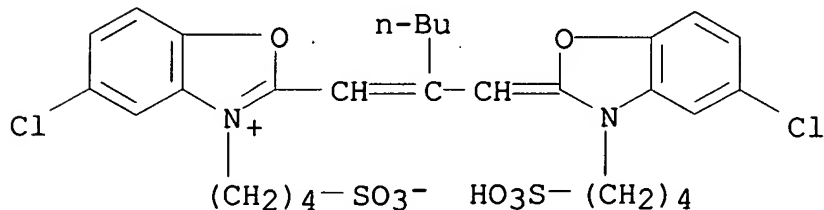
RN 156534-99-5 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-3-phenyl-1-propenyl]-5-phenyl-, iodide (9CI) (CA INDEX NAME)



RN 156535-00-1 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-hexenyl]-3-(4-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



RN 156535-02-3 HCAPLUS

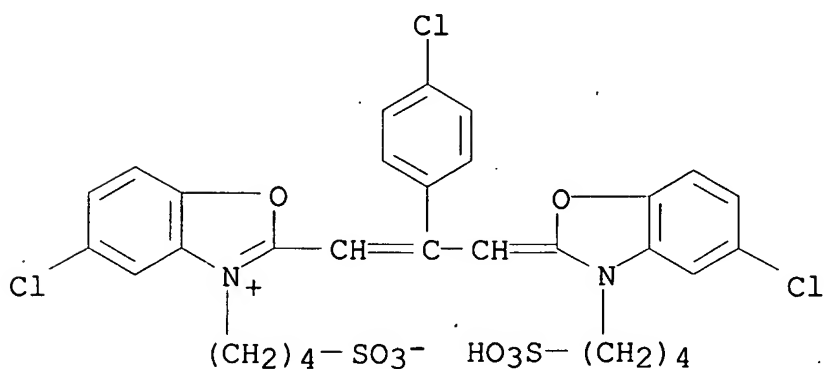


CN Benzoxazolium, 5-chloro-2-[2-(4-chlorophenyl)-3-[5-chloro-1-(4-sulfobutyl)-2(3H)-benzoxazolylidene]-1-propenyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 156535-01-2

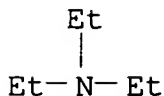
CMF C31 H29 Cl3 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-305

ICS G03C001-18

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **67326-80-1 119105-68-9 123820-83-7**

**153575-29-2 156534-96-2 156534-98-4**

**156534-99-5 156535-00-1 156535-02-3**

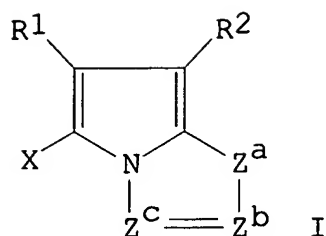
(photog. spectral sensitizer, color photog. film with silver halide emulsion layer containing, for interlayer effect in

red-sensitive silver halide layer)

L29 ANSWER 19 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:446483 HCAPLUS  
 DOCUMENT NUMBER: 121:46483  
 TITLE: Silver halide color photographic material  
 INVENTOR(S): Nagaoka, Satoshi; Yamakawa, Kazuyoshi;  
 Yamamoto, Mitsuru; Suzuki, Makoto; Shimada,  
 Yasuhiro; Nagaoka, Katsuro; Ikeda, Hideo;  
 Hara, Takefumi; Shuto, Sadanobu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 181 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 566115	A1	19931020	EP 1993-106136	1993 0415
R: BE, DE, FR, GB, NL JP 05289270	A2	19931105	JP 1992-119862	1992 0415
US 5460929	A	19951024	US 1993-45776	1993 0414
US 5578441	A	19961126	US 1994-315573	1994 0930
PRIORITY APPLN. INFO.:			JP 1992-119862	A 1992 0415
			US 1993-45776	A3 1993 0414

OTHER SOURCE(S): MARPAT 121:46483  
 GI



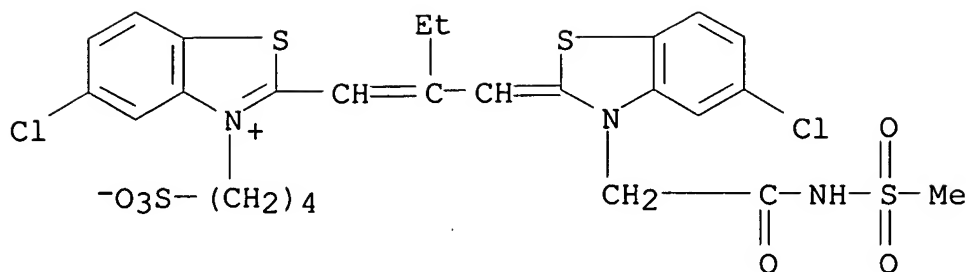
AB There is disclosed a silver halide color photog. material having  $\geq 1$  red-sensitive silver halide emulsion layer,  $\geq 1$  **green-sensitive** silver halide emulsion layer, and  $\geq 1$  blue-sensitive silver halide emulsion layer, wherein  $\geq 1$  of the emulsion layers contains  $\geq 1$  cyan dye-forming coupler represented by the formula I wherein Za represents NH or CHR<sup>3</sup>, Zb and Zc represent CR<sup>4</sup> or N, R<sup>1-3</sup> represent an electron-attracting group wherein the Hammett substituent constant  $\sigma_p$  value is 0.20 or more, provided that the sum of the  $\sigma_p$  value of R<sup>1</sup> and the  $\sigma_p$  value of R<sup>2</sup> is 0.65 or more, R<sup>4</sup> represents a hydrogen atom or a substituent, if there are two groups R<sup>4</sup> in the formula, they may be the same or different, and X represents a hydrogen atom or a group capable of being released upon a coupling reaction with the oxidized product of an aromatic primary amine color-developing agent, provided that R<sup>1-4</sup> or X may be a divalent group to form a homopolymer or a copolymer by bonding with a dimer or higher polymer or polymer chain and  $\geq 1$  sensitizing dye containing a sulfonamido group.

IT **148364-34-5 148364-35-6 148364-36-7**  
**148364-38-9 149702-96-5 149703-02-6**  
**149703-03-7 149703-04-8**

(silver halide color photog. materials containing pyrrolopyrazole cyan photog couplers and)

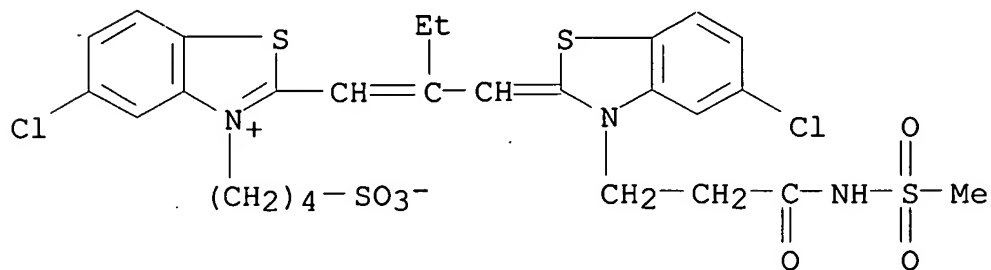
RN 148364-34-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



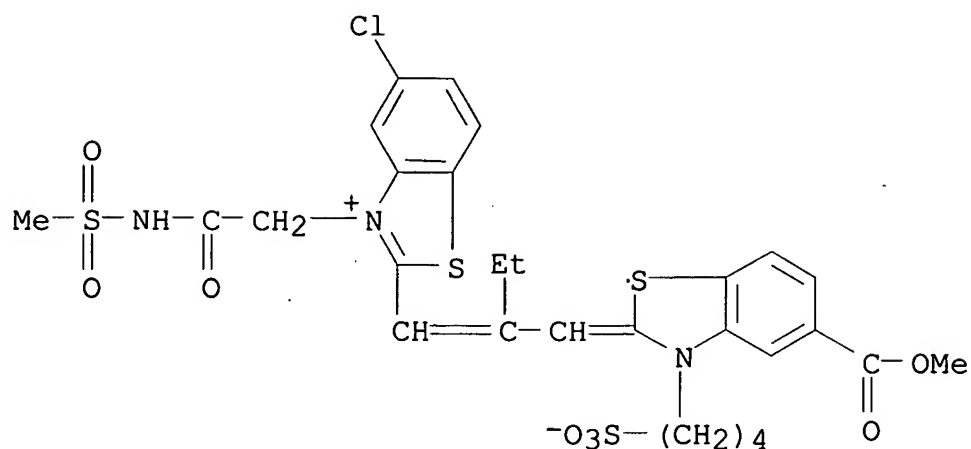
RN 148364-35-6 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[3-  
[(methylsulfonyl)amino]-3-oxopropyl]-2(3H)-  
benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner  
salt (9CI) (CA INDEX NAME)



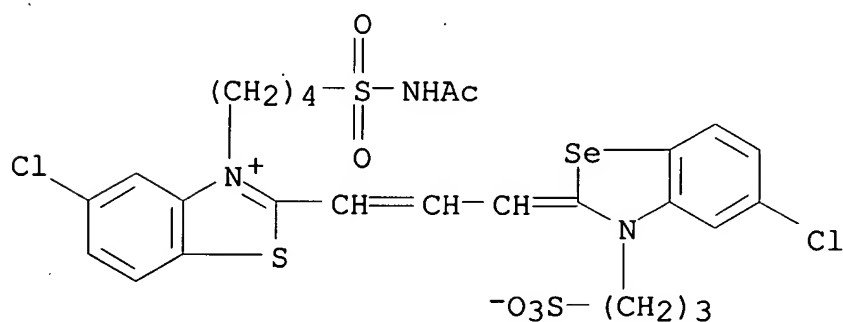
RN 148364-36-7 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-(methoxycarbonyl)-3-(4-  
sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-[2-  
[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX  
NAME)



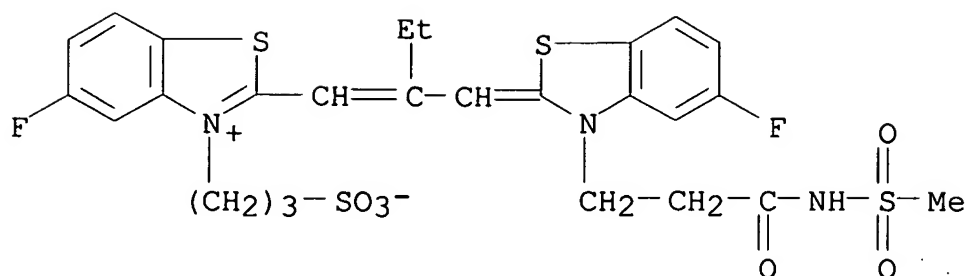
RN 148364-38-9 HCAPLUS

CN Benzothiazolium, 3-[4-[(acetylamino)sulfonyl]butyl]-5-chloro-2-[3-[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoselenazolylydene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)



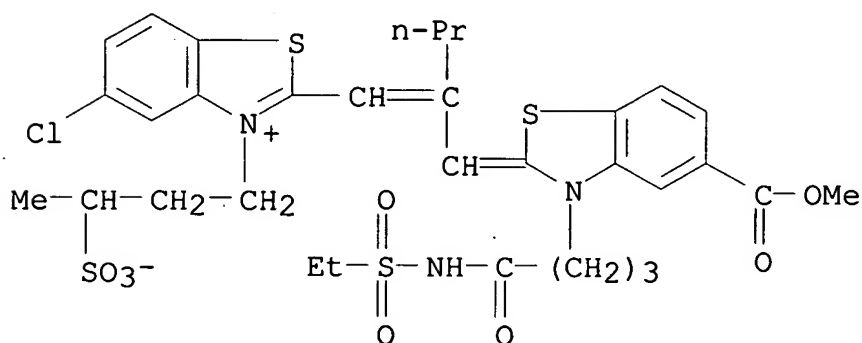
RN 149702-96-5 HCAPLUS

CN Benzothiazolium, 5-fluoro-2-[2-[[5-fluoro-3-[3-[(methylsulfonyl)amino]-3-oxopropyl]-2(3H)-benzothiazolylydene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



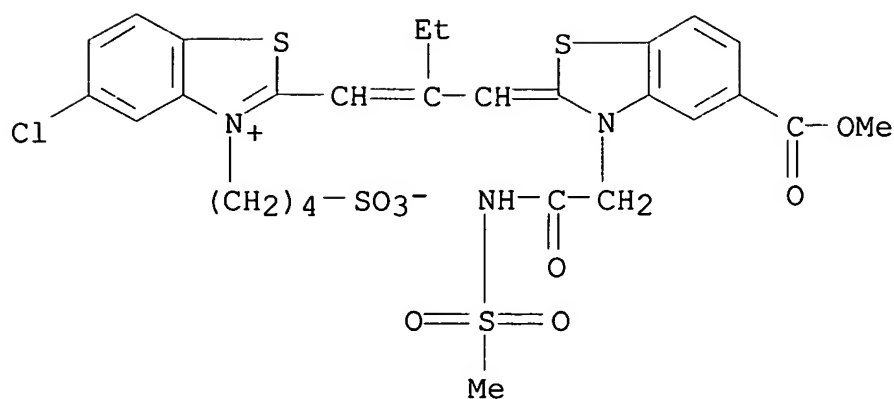
RN 149703-02-6 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[3-[4-[(ethylsulfonyl)amino]-4-oxobutyl]-5-(methoxycarbonyl)-2(3H)-benzothiazolylidene]methyl]-1-pentenyl]-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



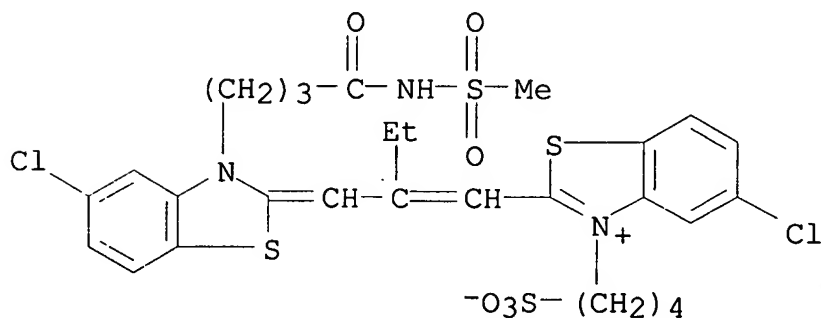
RN 149703-03-7 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-(methoxycarbonyl)-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 149703-04-8 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[4-[(methylsulfonyl)amino]-4-oxobutyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-38

ICS G03C007-30; G03C007-305; G03C001-14

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 148364-34-5 148364-35-6 148364-36-7

148364-38-9 149702-96-5 149703-02-6

149703-03-7 149703-04-8

(silver halide color photog. materials containing pyrrolopyrazole cyan photog couplers and)

L29 ANSWER 20 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:659381 HCAPLUS

USHA SHRESTHA REM 4B28

DOCUMENT NUMBER: 119:259381  
 TITLE: **Green-sensitive** silver  
 halide photographic emulsion having excellent  
 color reproducibility  
 INVENTOR(S): Ikegawa, Akihiko; Okazaki, Masaki  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 04352150	A2	19921207 /	JP 1991-153680	1991 0530
PRIORITY APPLN. INFO.: JP 1991-153680				1991 0530

GI

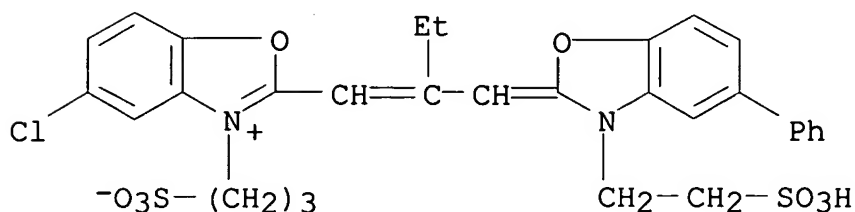
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*

AB The title photog. emulsion comprises  $\geq 1$  asym. cyanine dye I  
 [R<sub>1,2</sub> = C<sub>1-6</sub> alkyl; Z<sub>1</sub> = atomic group forming benzene ring; Z<sub>2</sub> =  
 atomic  
 group forming benzothiazole or benzoselenazole ring; X<sub>1</sub><sup>-</sup> = anion  
 pair; r = number necessary for neutralizing intramol. charge] and  
 $\geq 1$  sym. cyanine dyes II [A<sub>1</sub> = alkyl; X<sub>2</sub><sup>-</sup> = X<sub>1</sub><sup>-</sup>; and m =  
 same meaning as r], III [Z<sub>2</sub> = Z<sub>1</sub>; A<sub>2</sub> = A<sub>1</sub>; X<sub>3</sub><sup>-</sup> = X<sub>2</sub><sup>-</sup>; and n = same  
 meaning as r], and IV [X<sub>4</sub><sup>-</sup> = X<sub>3</sub><sup>-</sup>; and p = same meaning as r].  
 IT 106518-54-1 150980-86-2 150980-87-3  
 150980-88-4 150980-89-5 151200-00-9  
 151200-01-0 151230-80-7 151230-82-9  
 (sensitizer, green-sensitive  
 silver halide photog. emulsion containing)  
 RN 106518-54-1 HCAPLUS

USHA SHRESTHA REM 4B28

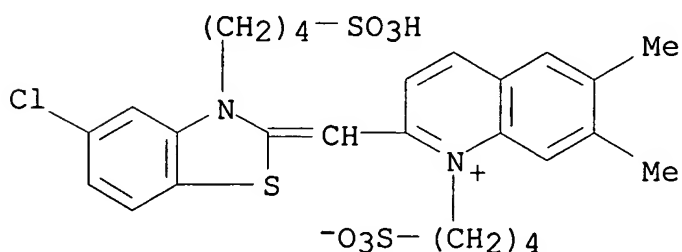


CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 150980-86-2 HCAPLUS

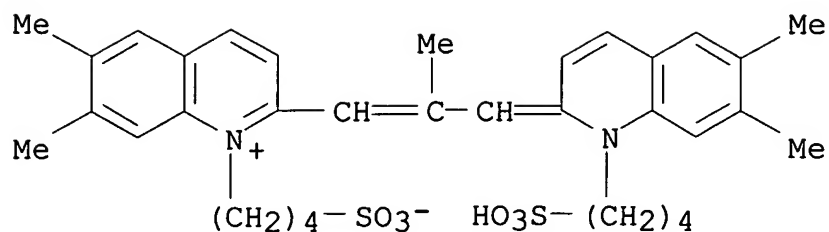
CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6,7-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 150980-87-3 HCAPLUS

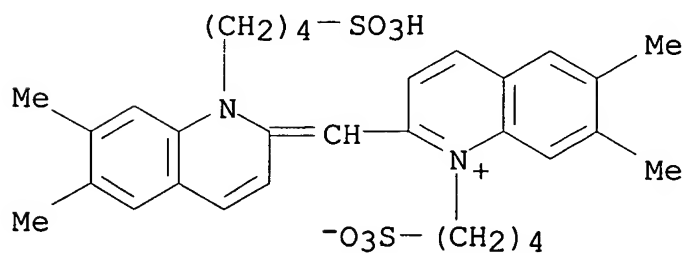
CN Quinolinium, 2-[3-[6,7-dimethyl-1-(4-sulfobutyl)-2(1H)-quinolinylydene]-2-methyl-1-propenyl]-6,7-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 150980-88-4 HCAPLUS

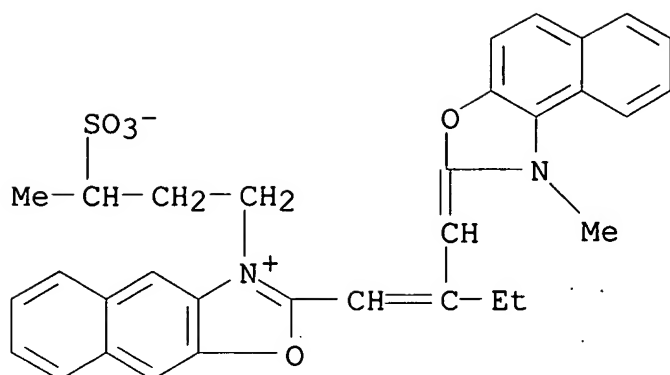
CN Quinolinium, 2-[[6,7-dimethyl-1-(4-sulfobutyl)-2(1H)-quinolinylidene]methyl]-6,7-dimethyl-1-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 150980-89-5 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[(1-methylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



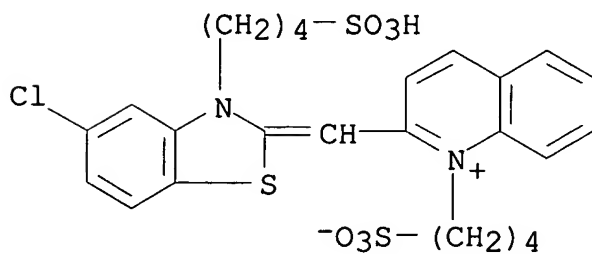
RN 151200-00-9 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 151199-99-4

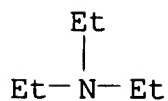
CMF C25 H27 Cl N2 O6 S3



CM 2

CRN 121-44-8

CMF C6 H15 N

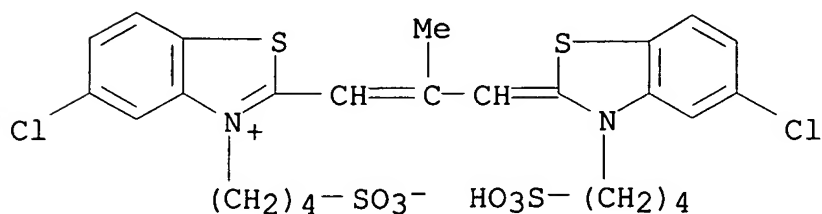


RN 151200-01-0 HCAPLUS  
 CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 30457-67-1

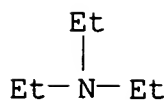
CMF C26 H28 Cl2 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N

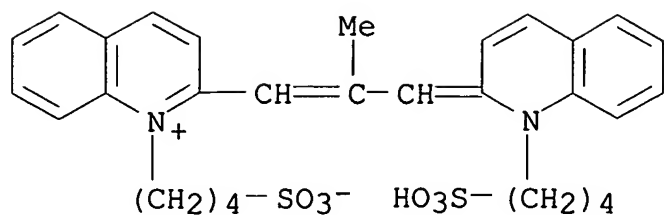


RN 151230-80-7 HCAPLUS  
 CN Quinolinium, 2-[2-methyl-3-[1-(4-sulfobutyl)-2(1H)-quinolinylidene]-1-propenyl]-1-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 151230-79-4

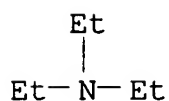
CMF C30 H34 N2 O6 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



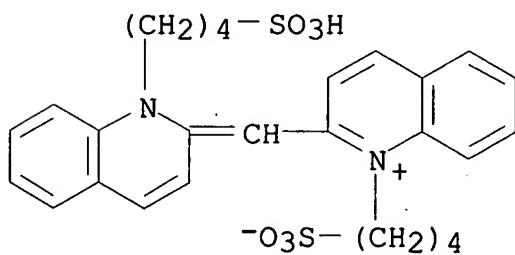
RN 151230-82-9 HCAPLUS

CN Quinolinium, 1-(4-sulfobutyl)-2-[[1-(4-sulfobutyl)-2(1H)-quinolinyldene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 151230-81-8

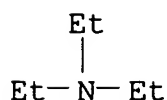
CMF C27 H30 N2 O6 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C001-29  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 ST **green sensitive** silver halide emulsion; asym  
 cyanine dye photog emulsion; sym cyanine dye photog emulsion  
 IT Photographic emulsions  
 (color, **green-sensitive**, containing asym. and  
 sym. cyanine dyes)  
 IT **106518-54-1 150980-86-2 150980-87-3**  
**150980-88-4 150980-89-5 151200-00-9**  
**151200-01-0 151230-80-7 151230-82-9**  
 (**sensitizer, green-sensitive**  
 silver halide photog. emulsion containing)

L29 ANSWER 21 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:437430 HCAPLUS  
 DOCUMENT NUMBER: 119:37430  
 TITLE: Silver halide color photographic material  
 INVENTOR(S): Nagaoka, Katsuro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 69 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 04366946	A2	19921218	JP 1991-169067	1991 0614
PRIORITY APPLN. INFO.:			JP 1991-169067	1991 0614

GI For diagram(s), see printed CA Issue.

AB In the title material comprising a support having thereon one or more blue-sensitive silver halide emulsion layers, **green -sensitive** silver halide emulsion layers, etc., said blue-sensitive silver halide emulsion layers contain an acylacetamide yellow coupler whose acyl moiety is represented by I. For I, X = monovalent group; Q = non-metallic atoms which, together with C, form a 3- to 5-membered hydrocarbon ring or 3- to 5-membered heterocyclic ring; further details on said heterocyclic ring is given; a proviso is given. Said blue-sensitive silver halide emulsion layers also contain a sensitizing dye (Markush structure given). The title material gives excellent color reproduction

IT **90901-34-1 94393-21-2 147295-28-1  
147739-29-5**

(photog. sensitizing dye)

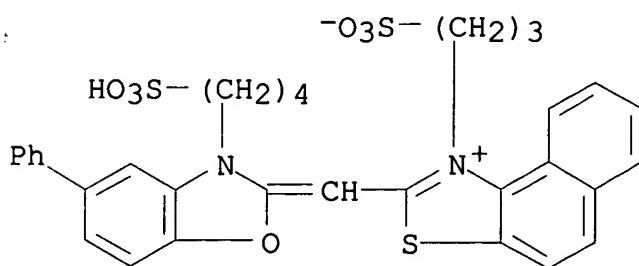
RN 90901-34-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 90901-33-0

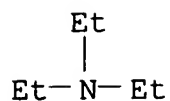
CMF C32 H30 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



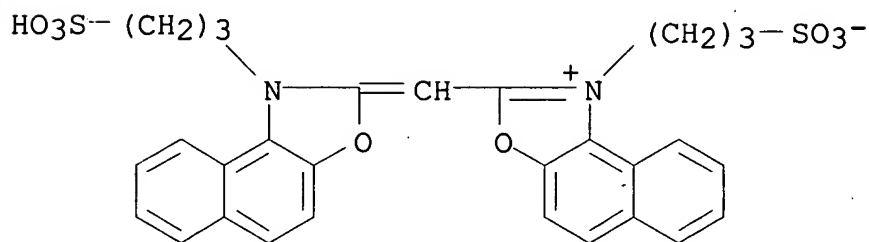
RN 94393-21-2 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 94393-20-1

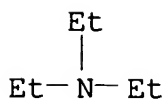
CMF C29 H26 N2 O8 S2



CM 2

CRN 121-44-8

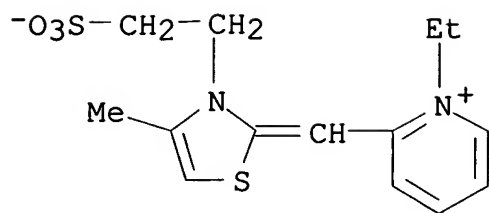
CMF C6 H15 N



RN 147295-28-1 HCAPLUS

CN Pyridinium, 1-ethyl-2-[[4-methyl-3-(2-sulfoethyl)-2(3H)-thiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)





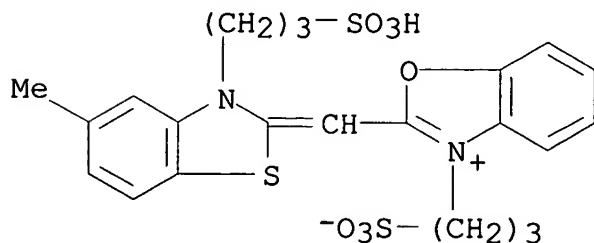
RN 147739-29-5 HCAPLUS

CN Benzoxazolium, 2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 147739-28-4

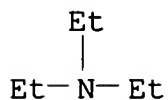
CMF C22 H24 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-36

ICS G03C001-16

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

USHA SHRESTHA

REM 4B28

Section cross-reference(s): 41

IT 90901-34-1 94393-21-2 147295-28-1  
147739-29-5  
(photog. sensitizing dye)

L29 ANSWER 22 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1993:244499 HCAPLUS  
DOCUMENT NUMBER: 118:244499  
TITLE: Silver halide color photographic material  
INVENTOR(S): Nagaoka, Katsuro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 75 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 04368939	A2	19921221	JP 1991-171902	1991 0618
PRIORITY APPLN. INFO.:			JP 1991-171902	1991 0618

GI For diagram(s), see printed CA Issue.

AB In the title material comprising a support having thereon  
≥1 blue sensitive silver halide emulsion layers, ≥1  
**green sensitive** silver halide emulsion layers,  
etc., the said blue sensitive emulsion layers contain an anilide  
yellow coupler represented by X1X2NCOCHZCONHY and I where X1, X2 =  
alkyl, aryl, heterocyclic ring; X3 = organic residue which, together  
with N, form an N-containing heterocyclic ring; Y = aryl, or  
heterocyclic ring; Z = group to be released at the time of  
reaction of the coupler with an oxidized developing agent. The  
title material also contains a sensitizing dye (Markush structure  
given). The use of the title material gives excellent color  
reproduction

IT 90901-34-1 94393-21-2 147295-28-1  
147739-29-5  
(photog. sensitizing dye)

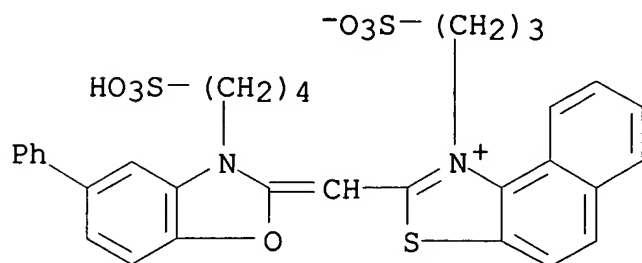
RN 90901-34-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 90901-33-0

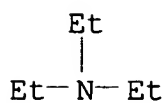
CMF C32 H30 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



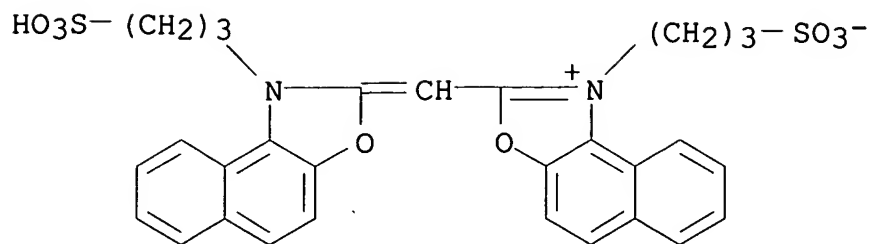
RN 94393-21-2 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 94393-20-1

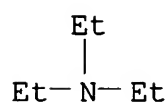
CMF C29 H26 N2 O8 S2



CM 2

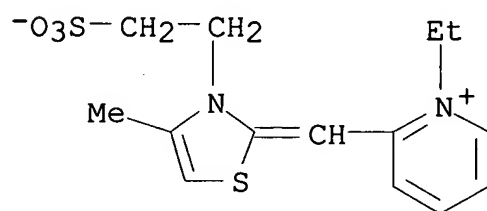
CRN 121-44-8

CMF C6 H15 N



RN 147295-28-1 HCAPLUS

CN Pyridinium, 1-ethyl-2-[[4-methyl-3-(2-sulfoethyl)-2(3H)-thiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



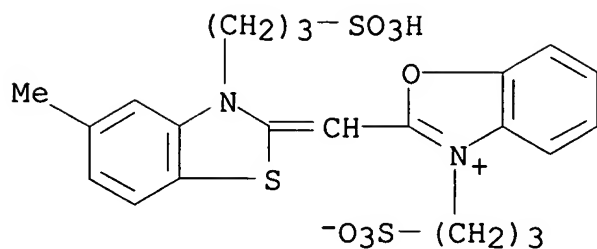
RN 147739-29-5 HCAPLUS

CN Benzoxazolium, 2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 147739-28-4

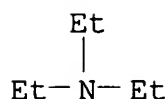
CMF C22 H24 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-36

ICS G03C001-16

CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)IT **90901-34-1 94393-21-2 147295-28-1**  
**147739-29-5**

(photog. sensitizing dye)

L29 ANSWER 23 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:180201 HCAPLUS

DOCUMENT NUMBER: 118:180201

TITLE: Multicolor optical filler for color image  
pickup tubes and change-coupled devicesINVENTOR(S): Asano, Takahiro; Mizuguchi, Shinichi; Inami,  
Takashi; Ishikawa, Toshio; Yoshimura, Norio  
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd.,  
Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

USHA SHRESTHA REM 4B28

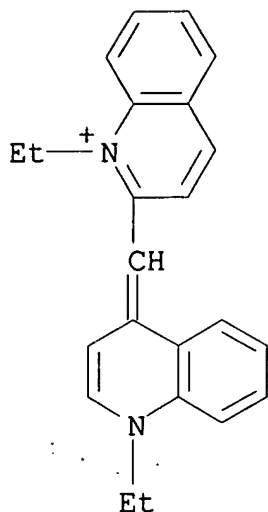
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 04186202	A2	19920703	JP 1990-317233	1990 1120
PRIORITY APPLN. INFO.:			JP 1990-317233	1990 1120

AB The title multicolor filter is obtained by forming a **green**  
**-sensitive** layer containing halide and a dye sensitive to  
500-600-nm light, and a red-sensitive layer containing Ag halide and a  
dye sensitive in the 400-500 and 600-700-nm wavelength region, a  
blue-sensitive Ag halide containing layer, and a yellow filter sheet,  
exposing to patterned red, green, blue, and black light, resp. and  
coloring via external coloring to magenta, cyan, and yellow,  
resp., and removing Ag from the exposed areas. The dyes used are  
1,1'-diethyl-2,4'-cyanine iodide and 1,1'-diethyl-2,2'-cyanine  
iodide for the **green-sensitive** layer, and  
1,1'-diethyl-2,4'-carbocyanine iodide or 3,3'-  
diethylthiodicarbocyanine iodide for the red-sensitive layer.

IT **634-21-9**, 1,1'-Diethyl-2,4'-cyanine iodide  
**977-96-8**, 1,1'-Diethyl-2,2'-cyanine iodide  
(dye, **green-sensitive** layer containing, for  
optical filter production)

RN 634-21-9 HCAPLUS

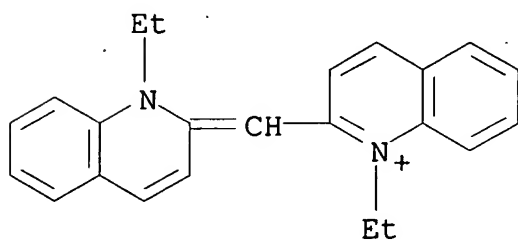
CN Quinolinium, 1-ethyl-2-[(1-ethyl-4(1H)-quinolinylidene)methyl]-,  
iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 977-96-8 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(1-ethyl-2(1H)-quinolinylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

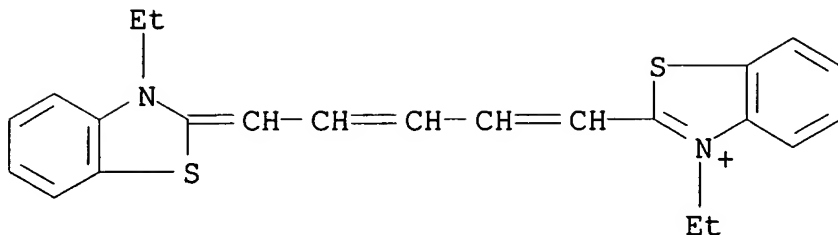
IT 514-73-8

(dye, red-sensitive layer containing, for optical filter production)

RN 514-73-8 HCAPLUS

CN Benzothiazolium, 3-ethyl-2-[5-(3-ethyl-2(3H)-benzothiazolylidene)-2-phenyl-1,3,4-oxadiazol-5-yl]benzothiazolium, iodide (9CI) (CA INDEX NAME)

1,3-pentadienyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

IC ICM G02B005-20  
 CC 74-13 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 73  
 IT **634-21-9**, 1,1'-Diethyl-2,4'-cyanine iodide  
**977-96-8**, 1,1'-Diethyl-2,2'-cyanine iodide  
 (dye, **green-sensitive** layer containing, for  
 optical filter production)  
 IT **514-73-8**  
 (dye, red-sensitive layer containing, for optical filter  
 production)

L29 ANSWER 24 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:157664 HCAPLUS  
 DOCUMENT NUMBER: 118:157664  
 TITLE: Color proof preparation using photographic  
 material  
 INVENTOR(S): Kuwajima, Shigeru; Aoki, Mario  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
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USHA SHRESTHA REM 4B28



JP 04186342

A2

19920703

JP 1990-316438

1990

1121

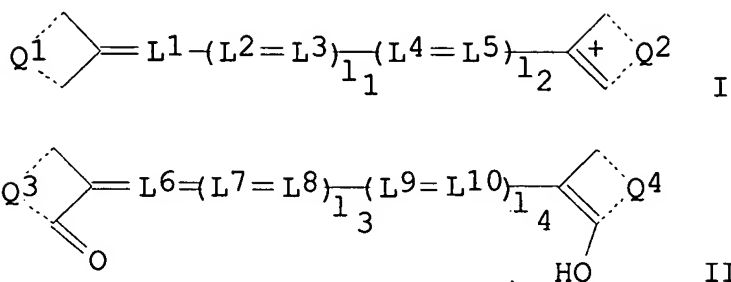
PRIORITY APPLN. INFO.:

JP 1990-316438

1990

1121

GI



AB In making half tone color proofs by color separating a color original, forming black and white half tone images following half tone conversion, exposing through the half tone images using the color separated light or its complement to form half tone color images on a color photog. material, the photog. material contains  $\geq 1$  blue sensitive emulsion layers,  $\geq 1$  **green-sensitive** emulsion layers, and  $\geq 1$  red-sensitive emulsion layers from unperfogged internal latent image type Ag halide emulsions, and the Ag halide emulsion layer or the hydrophilic colloid layer contains (I) [Q1, Q2 = atoms required to form a basic heterocycle; L1-5 = methine, 11, 12 = 0, 1; 11 + 12 = integer  $\geq 1$ ;  $\geq 3$  acid groups and present in the mol.] and/or (II) [Q3, Q4 = atoms required to form acidic ring; L6-10 = methine group; 13, 14 = 0, 1; 13 + 14 = integer  $\geq 1$ ;  $\geq 2$  acid groups are present in the mol]. Color proofs closely resembling the original can be produced.

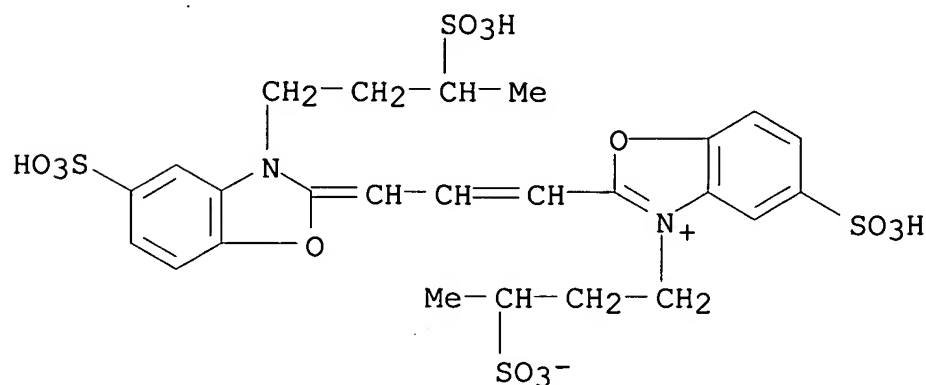
IT **146695-51-4 146695-52-5 146695-53-6**  
**146695-54-7 146695-55-8 146695-56-9**  
**146715-37-9**

(photog. material for color proofing containing)

RN 146695-51-4 HCAPLUS

CN Benzoxazolium, 5-sulfo-3-(3-sulfobutyl)-2-[3-[5-sulfo-3-(3-

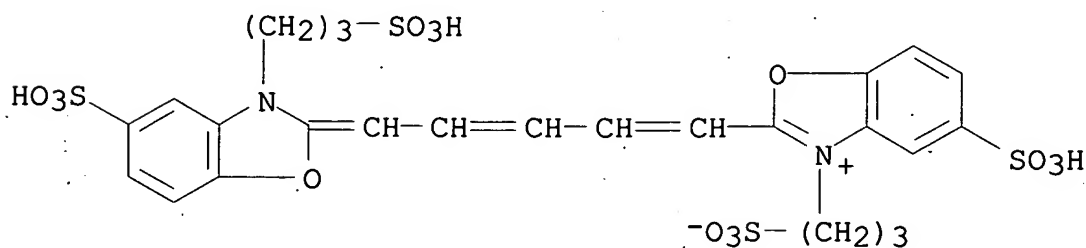
sulfobutyl)-2(3H)-benzoxazolylidene]-1-propenyl]-, inner salt, tripotassium salt (9CI) (CA INDEX NAME)



● 3 K

RN 146695-52-5 HCAPLUS

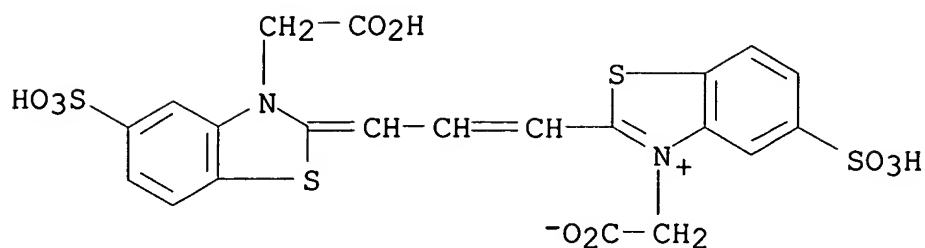
CN Benzoxazolium, 5-sulfo-3-(3-sulfopropyl)-2-[5-[5-sulfo-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]-1,3-pentadienyl]-, inner salt, tripotassium salt (9CI) (CA INDEX NAME)



● 3 K

RN 146695-53-6 HCAPLUS

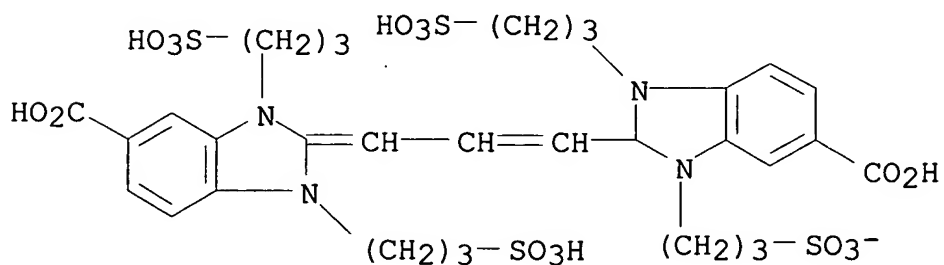
CN Benzothiazolium, 3-(carboxymethyl)-2-[3-[3-(carboxymethyl)-5-sulfo-2(3H)-benzothiazolylidene]-1-propenyl]-5-sulfo-, inner salt, trisodium salt (9CI) (CA INDEX NAME)



●3 Na

RN 146695-54-7 HCAPLUS

CN 1H-Benzimidazolium, 5-carboxy-2-[3-[5-carboxy-1,3-dihydro-1,3-bis(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1,3-bis(3-sulfopropyl)-, inner salt, pentapotassium salt (9CI) (CA INDEX NAME)

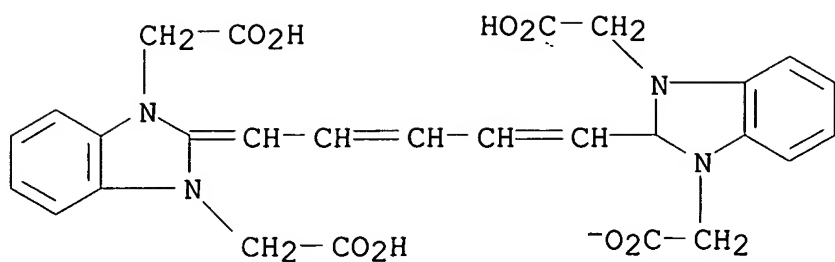


●5 K

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 146695-55-8 HCAPLUS

CN 1H-Benzimidazolium, 2-[5-[1,3-bis(carboxymethyl)-1,3-dihydro-2H-benzimidazol-2-ylidene]-1,3-pentadienyl]-1,3-bis(carboxymethyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

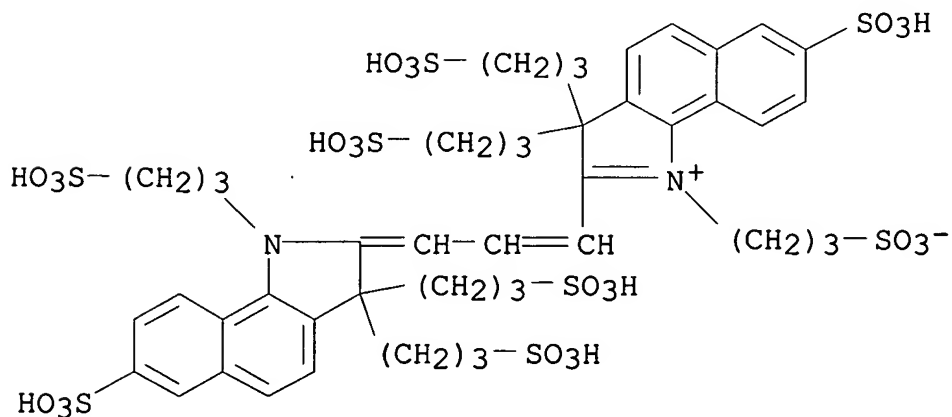


● 3 Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 146695-56-9 HCAPLUS

CN 3H-Benz[g]indolium, 2-[3-[1,3-dihydro-7-sulfo-1,3,3-tris(3-sulfopropyl)-2H-benz[g]indol-2-ylidene]-1-propenyl]-7-sulfo-1,3,3-tris(3-sulfopropyl)-, inner salt, heptasodium salt (9CI) (CA INDEX NAME)



● 7 Na

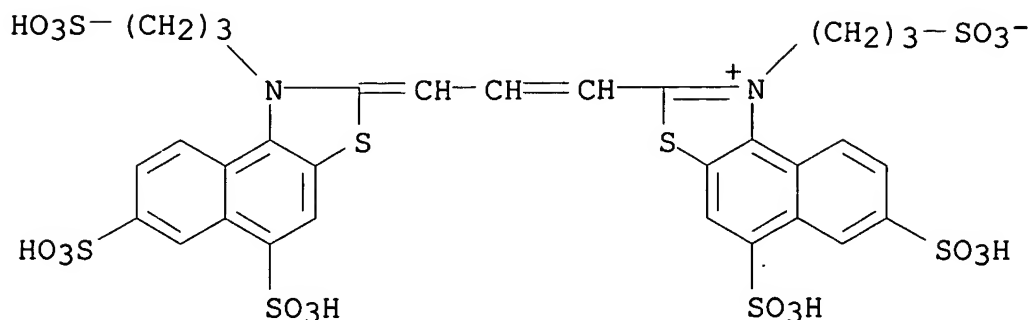
RN 146715-37-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-[5,7-disulfo-1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]-1-propenyl]-5,7-

USHA SHRESTHA

REM 4B28

disulfo-1-(3-sulfopropyl)-, inner salt, pentasodium salt (9CI)  
(CA INDEX NAME)



● 5 Na

IC ICM G03C005-02  
ICS G03C001-40; G03C001-485; G03C007-00  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 134724-62-2 **146695-51-4 146695-52-5**  
**146695-53-6 146695-54-7 146695-55-8**  
**146695-56-9** 146695-57-0 146695-58-1 146695-59-2  
146695-60-5 146695-61-6 146695-62-7 146695-63-8  
146695-64-9 **146715-37-9**  
(photog. material for color proofing containing)

L29 ANSWER 25 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1993:29845 HCAPLUS  
DOCUMENT NUMBER: 118:29845  
TITLE: Light-sensitive silver halide color  
photographic material  
INVENTOR(S): Shimazaki, Hiroshi; Irie, Yasushi; Yabuuchi,  
Katuya  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Eur. Pat. Appl., 37 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

USHA SHRESTHA REM 4B28

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 499209	A1	19920819	EP 1992-102269	1992 0211
R: DE, FR, GB, NL JP 05040330	A2	19930219	JP 1991-42530	1991 0214
JP 2926662 US 5206124	B2 A	19990728 19930427 /	US 1992-832934	1992 0211
PRIORITY APPLN. INFO.:			JP 1991-42530	A 1991 0214

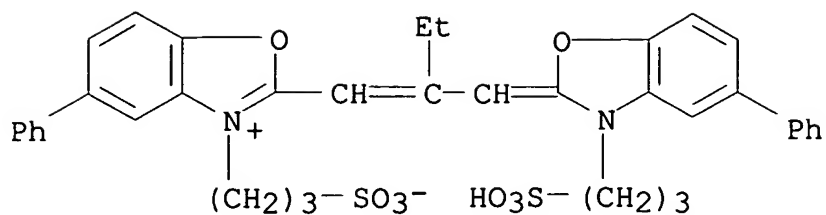
AB A Ag halide color photog. material is described comprising blue-, green-, and red-sensitive layers where the blue-sensitive layer has the maximum spectral sensitivity at a wavelength within the range of 415-470 nm and the spectral sensitivity at 480 nm of the blue-sensitive layer is  $\leq 35\%$  of the maximum sensitivity. The **green-sensitive** layer has the maximum spectral sensitivity at a wavelength within the range of 530-560 nm and the spectral sensitivity at 500 nm of the **green-sensitive** layer is  $\geq 25\%$  of the maximum sensitivity. The material is excellent in reproducibility of the green or blue subjects.

IT **33628-03-4 34141-97-4 90901-34-1**  
**114561-83-0**

(photog. spectral sensitizer)

RN 33628-03-4 HCAPLUS

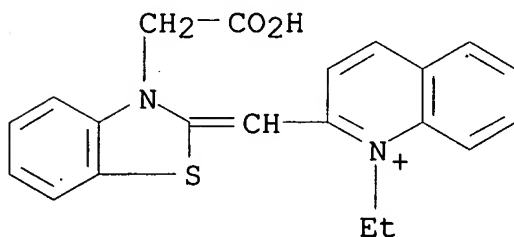
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 34141-97-4 HCAPLUS

CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

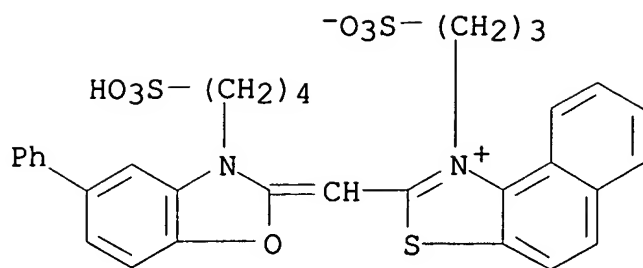
RN 90901-34-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 90901-33-0

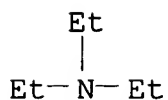
CMF C32 H30 N2 O7 S3



CM 2

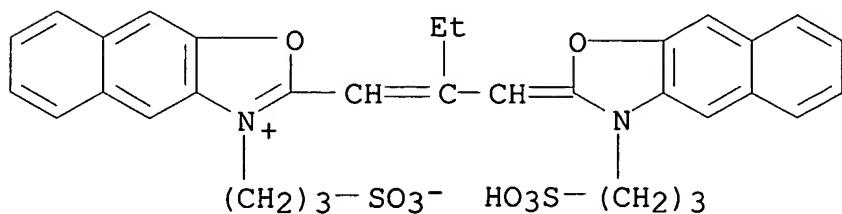
CRN 121-44-8

CMF C6 H15 N



RN 114561-83-0 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM G03C007-30

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

USHA SHRESTHA

REM 4B28



ST blue sensitivity photog film; **green sensitivity**  
photog film

IT **33628-03-4 34141-97-4 90901-34-1**  
**114561-83-0**

(photog. spectral sensitizer)

L29 ANSWER 26 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:661489 HCAPLUS

DOCUMENT NUMBER: 117:261489

TITLE: Silver halide photographic material spectrally  
sensitized in **green-**  
**sensitive** region

INVENTOR(S): Okusa, Hiroshi; Kagawa, Nobuaki; Tanaka, Mari

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 04044028	A2	19920213 )	JP 1990-153640	

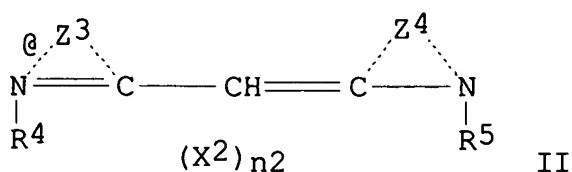
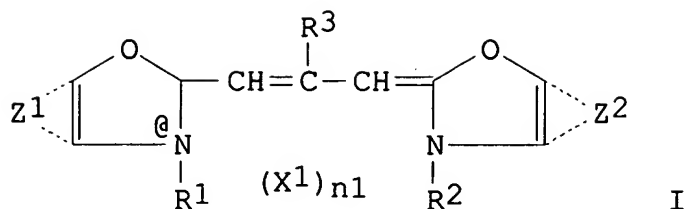
1990  
0611

PRIORITY APPLN. INFO.:

JP 1990-153640

1990  
0611

GI



AB In a Ag halide photog. material having  $\geq 1$  **green-sensitive** Ag halide emulsion layer on a support, Ag halide grains contained  $\geq 1$  **green-sensitive** Ag halide emulsion layer are sensitized by  $\geq 1$  sensitizing dye I and  $\geq 1$  sensitizing dye II [R1-5 = alkyl, alkenyl; R3 = H, alkyl, aryl; X1,2 = charge-balancing ion; n1, n2 = a value to neutralize charge of the overall mol.; Z1,2 = atomic group forming benzoxazole or naphthoxazole ring; Z3,4 = atomic group forming pyrroline, pyridine, quinoline, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, , thiazoline, thiazole, benzothiazole, naphthothiazole, selenathiazole, benzoselenazole, or naphthoselenazole] and the maximum spectral absorption peak of said emulsion is  $\geq 5$  nm apart from the maximum reflectance peak of a photog. emulsion sensitized by a single sensitizing dye.

IT 39201-42-8 51588-61-5 61919-60-6  
68392-94-9 75260-71-8 113477-02-4  
114175-87-0 119170-93-3 127430-78-8  
139536-86-0 143118-07-4 143118-12-1  
143128-80-7 143320-62-1 144722-21-4

(photog. spectral **sensitizer, green-**

**sensitized** silver halide photog. material containing)

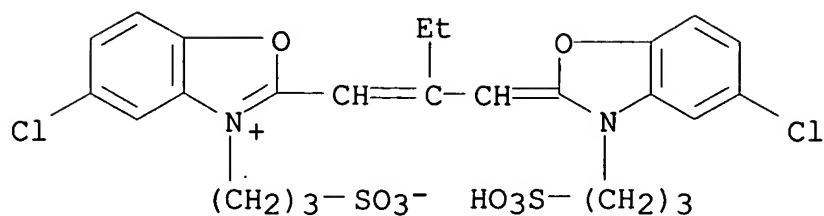
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7.

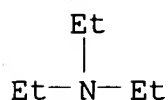
CMF C25 H26 Cl2 N2 O8 S2



CM 2

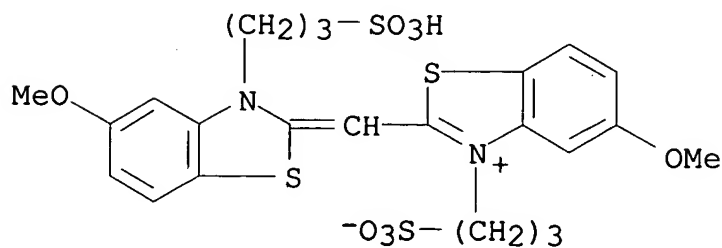
CRN 121-44-8

CMF C6 H15 N



RN 51588-61-5 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

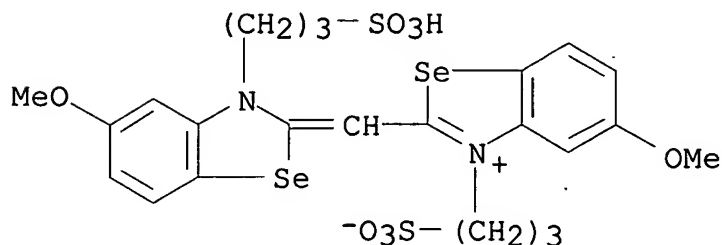


● Na

RN 61919-60-6 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-

benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt,  
sodium salt (9CI) (CA INDEX NAME)



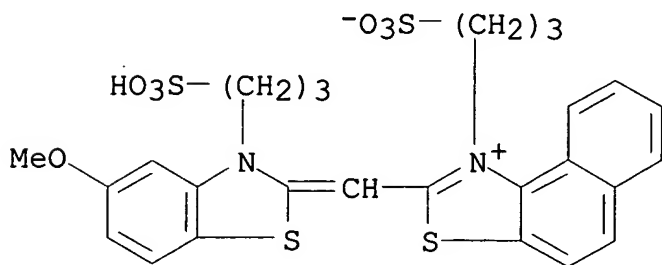
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolyliidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

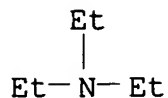
CMF C26 H26 N2 O7 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



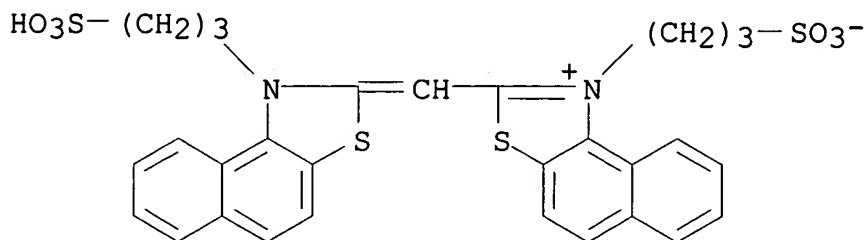
RN 75260-71-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70211-20-0

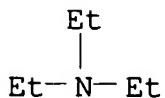
CMF C29 H26 N2 O6 S4



CM 2

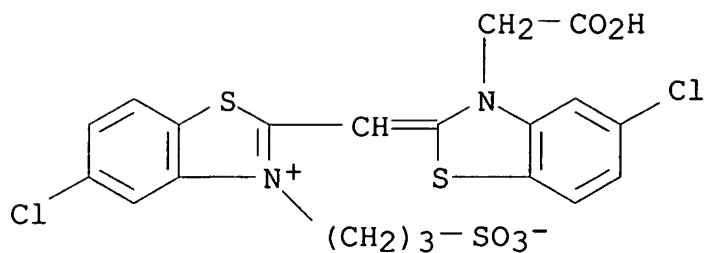
CRN 121-44-8

CMF C6 H15 N

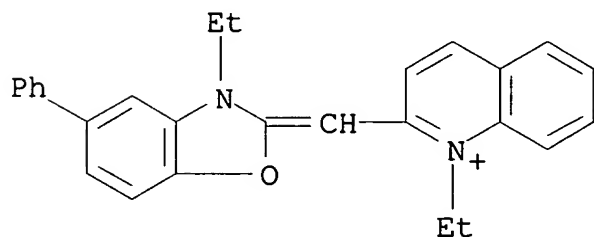


RN 113477-02-4 HCAPLUS

CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chloro-2(3H)-benzothiazolylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 114175-87-0 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



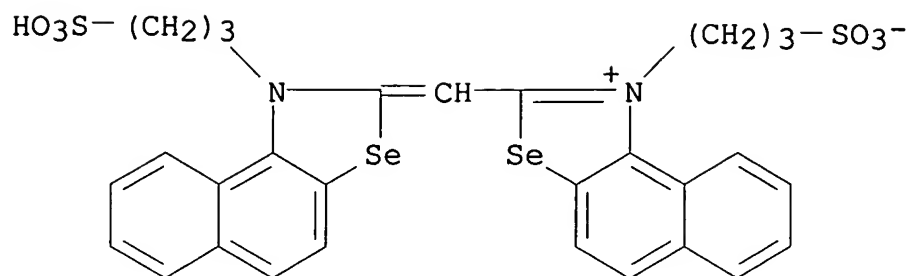
● I<sup>-</sup>

RN 119170-93-3 HCAPLUS  
 CN Naphtho[1,2-d]selenazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]selenazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 81367-64-8

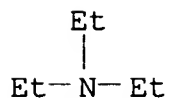
CMF C29 H26 N2 O6 S2 Se2



CM 2

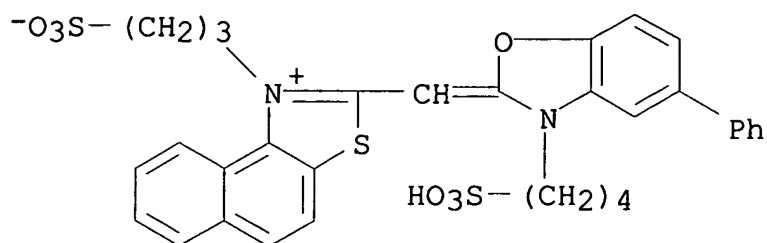
CRN 121-44-8

CMF C6 H15 N



RN 127430-78-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 139536-86-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-

USHA SHRESTHA

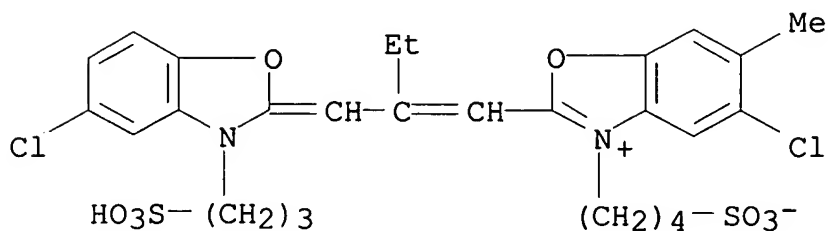
REM 4B28

benzoxazolylidene]methyl]-1-butenyl]-6-methyl-3-(4-sulfoethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 139536-85-9

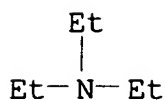
CMF C27 H30 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 143118-07-4 HCAPLUS

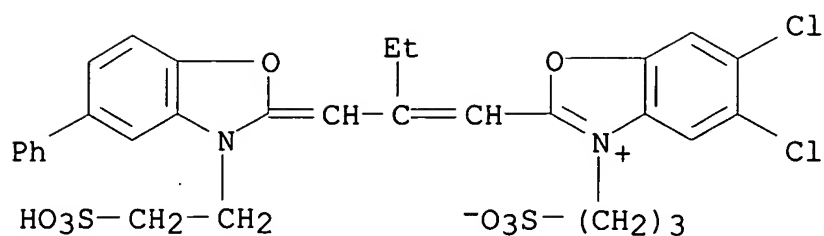
CN Benzoxazolium, 5,6-dichloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 143118-06-3

CMF C30 H28 Cl2 N2 O8 S2

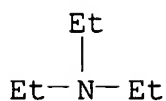




CM 2

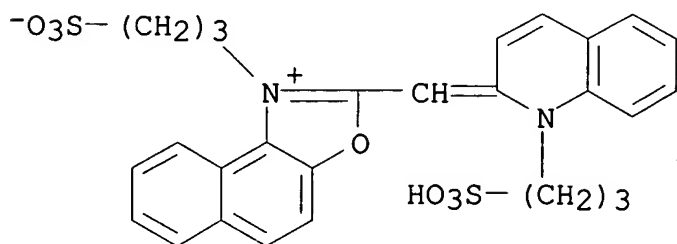
CRN 121-44-8

CMF C6 H15 N



RN 143118-12-1 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)-2(1H)-quinolinylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

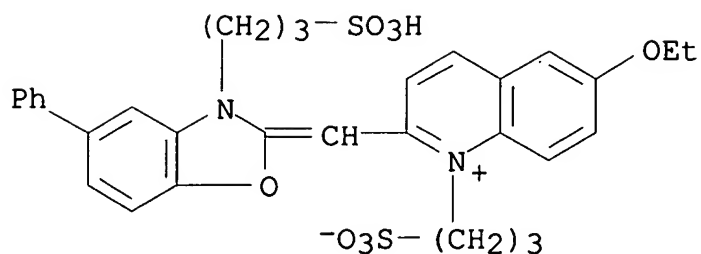


● Na

RN 143128-80-7 HCAPLUS

CN Quinolinium, 6-ethoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, lithium

salt (9CI) (CA INDEX NAME)

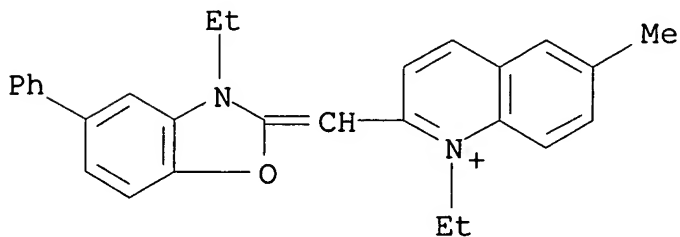


● Li

RN 143320-62-1 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[(3-ethyl-5-phenyl-2(3H)-  
 benzoxazolylidene)methyl]-6-methyl-, tetrafluoroborate(1-) (9CI)  
 (CA INDEX NAME)

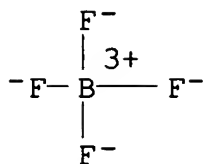
CM 1

CRN 143320-61-0  
 CMF C28 H27 N2 O

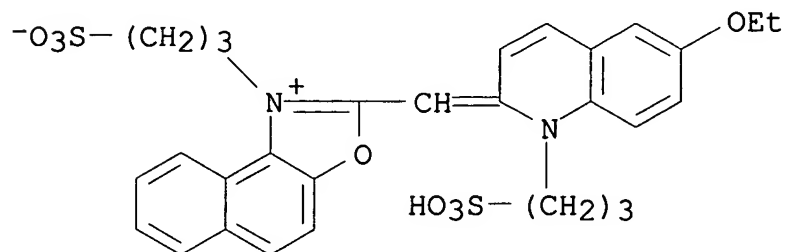


CM 2

CRN 14874-70-5  
 CMF B F4  
 CCI CCS



RN 144722-21-4 HCAPLUS  
 CN Naphth[1,2-d]oxazolium, 2-[[6-ethoxy-1-(3-sulfopropyl)-2(1H)-quinolinylylidene]methyl]-1-(3-sulfopropyl)-, inner salt, lithium salt (9CI) (CA INDEX NAME)



● Li

IC ICM G03C001-14  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
 IT Photographic emulsions  
     (color, containing **green-sensitizers**)  
 IT **39201-42-8 51588-61-5 61919-60-6**  
**68392-94-9 75260-71-8 113477-02-4**  
**114175-87-0 119170-93-3 127430-78-8**  
**139536-86-0 143118-07-4 143118-12-1**  
**143128-80-7 143320-62-1 144722-21-4**  
     (photog. spectral **sensitizer**, **green-**  
     **sensitized** silver halide photog. material containing)

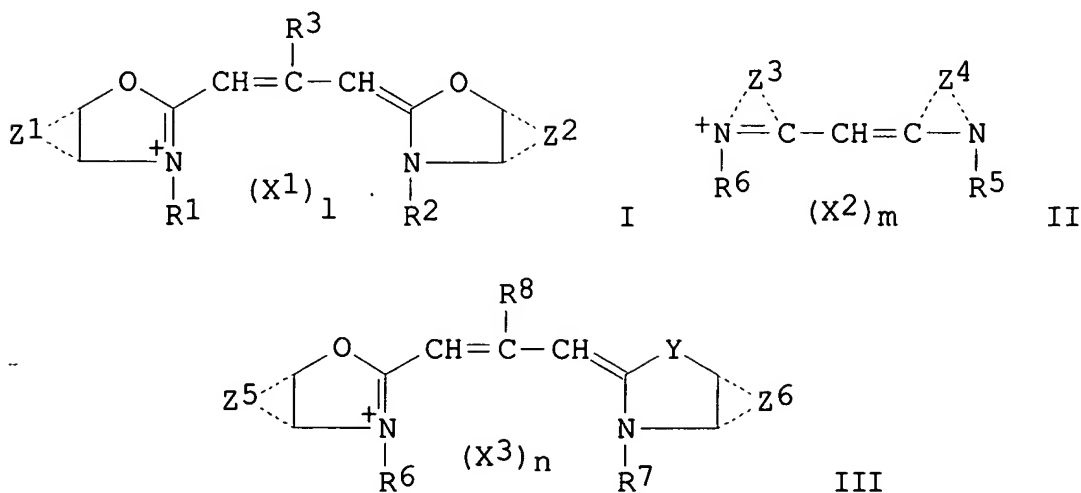
L29 ANSWER 27 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1992:540500 HCAPLUS  
 DOCUMENT NUMBER: 117:140500  
 TITLE: Color photographic material using spectral sensitizers

USHA SHRESTHA REM 4B28

INVENTOR(S): Okusa, Hiroshi; Kagawa, Nobuaki; Tanaka, Mari  
 PATENT ASSIGNEE(S): Konica K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04050941	A2	19920219	JP 1990-158368	1990 0615
PRIORITY APPLN. INFO.:				JP 1990-158368 1990 0615

GI



AB In the title full-color photog. material, the Ag halide grains contained in  $\geq 1$  **green-sensitive** emulsion layers are spectrally sensitized by  $\geq 1$  I,  $\geq 1$  II and  $\geq 1$  III [R1,2,4-7 = alkyl, alkenyl; R3,8 =

H, alkyl, aryl; X1-3 = anions with counter charge; l, m, n =  $\geq 1$  to neutralize the mol. net charge; Z1,2,5 = atoms required to complete benzoxazole; Z3,4 = atoms required to complete pyrroline, pyridine, quinoline, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, thiazoline, thiazole, benzothiazole, naphthothiazole, (benzo)selenazole, naphthoselenazole; Y = S, Se; Z6 = atoms to form benzothiazole, benzoselenazole]. This photog. material shows good color reproducibility and improved long-term stability.

IT 39201-42-8 61919-60-6 68392-94-9  
 75260-71-8 81645-24-1 85238-31-9  
 93054-11-6 114175-87-0 138551-18-5  
 143118-07-4 143118-08-5 143128-80-7  
 143314-62-9 143314-63-0 143314-64-1

(photog. spectral sensitizing dye, for improved color reproducibility)

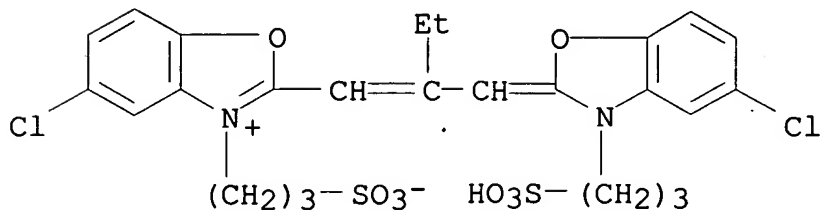
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

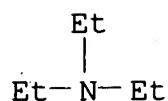
CMF C25 H26 Cl2 N2 O8 S2



CM 2

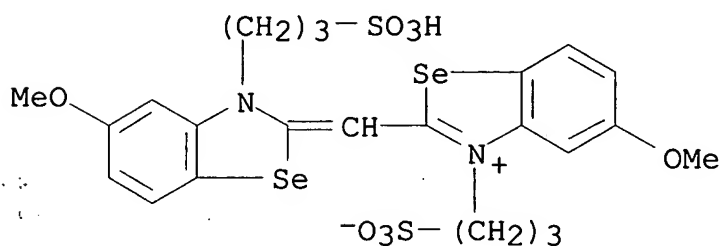
CRN 121-44-8

CMF C6 H15 N



RN 61919-60-6 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

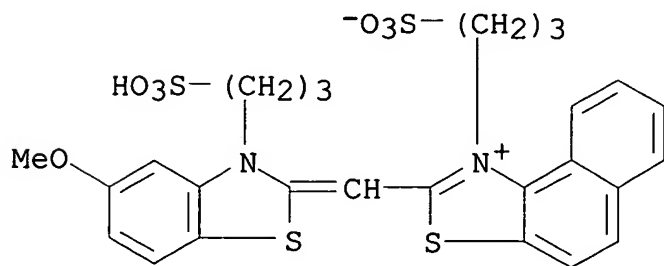
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

CMF C26 H26 N2 O7 S4



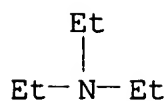
USHA SHRESTHA

REM 4B28

CM 2

CRN 121-44-8

CMF C6 H15 N



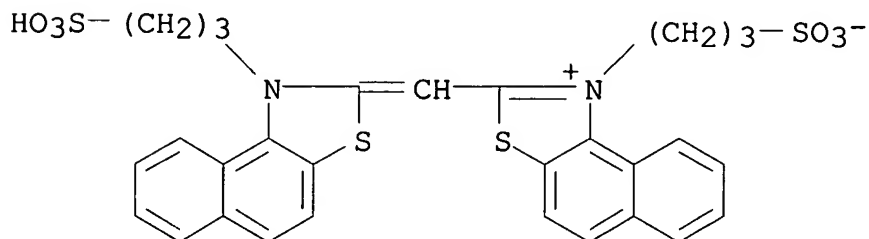
RN 75260-71-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70211-20-0

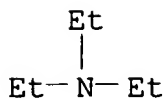
CMF C29 H26 N2 O6 S4



CM 2

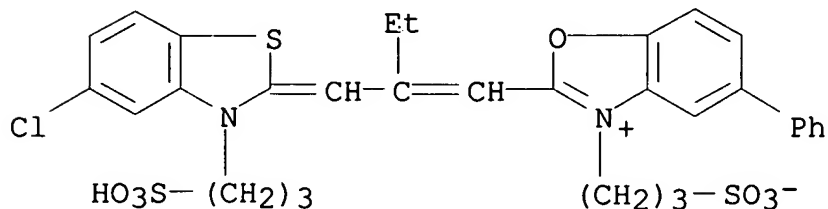
CRN 121-44-8

CMF C6 H15 N



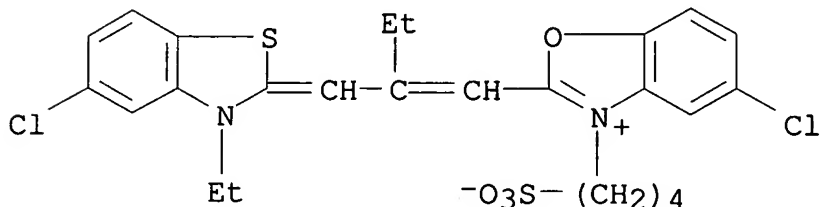
RN 81645-24-1 HCAPLUS

CN Benzoxazolium, 2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



RN 85238-31-9 HCAPLUS

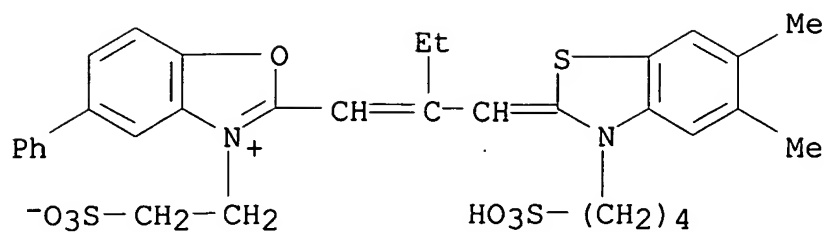
CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 93054-11-6 HCAPLUS

CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

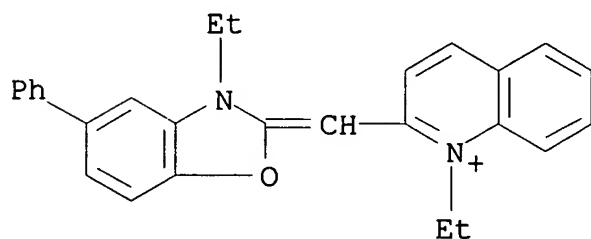




● Na

RN 114175-87-0 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

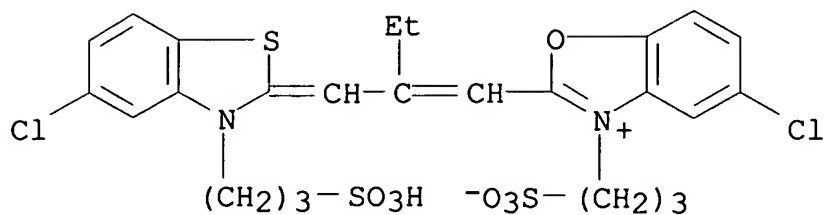
RN 138551-18-5 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 138551-17-4

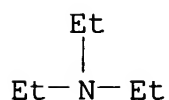
CMF C25 H26 Cl2 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N



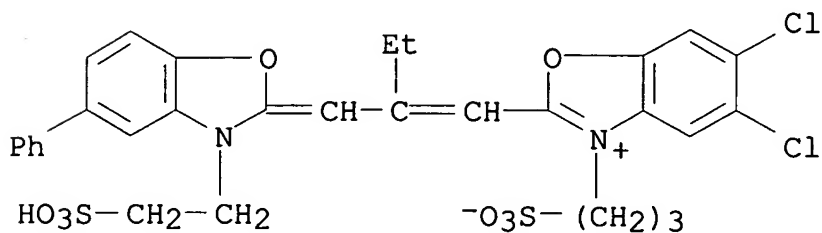
RN 143118-07-4 HCAPLUS

CN Benzoxazolium, 5,6-dichloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

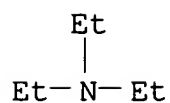
CRN 143118-06-3

CMF C30 H28 Cl2 N2 O8 S2

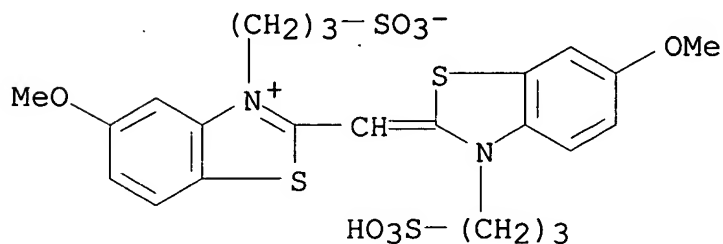


CM 2

CRN 121-44-8  
CMF C6 H15 N

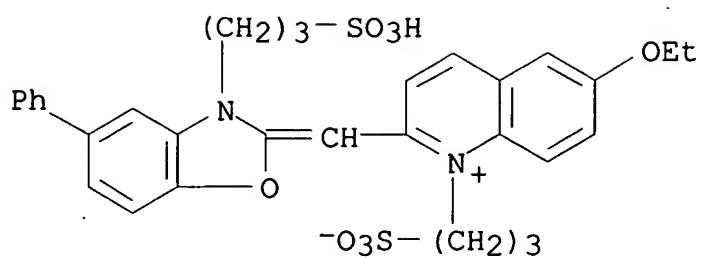


RN 143118-08-5 HCAPLUS  
CN Benzothiazolium, 5-methoxy-2-[[6-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylydene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

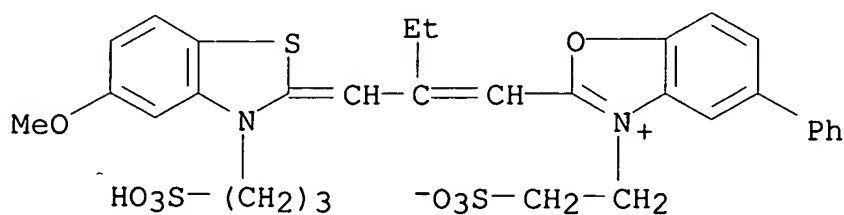
RN 143128-80-7 HCAPLUS  
CN Quinolinium, 6-ethoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylydene]methyl]-1-(3-sulfopropyl)-, inner salt, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 143314-62-9 HCAPLUS

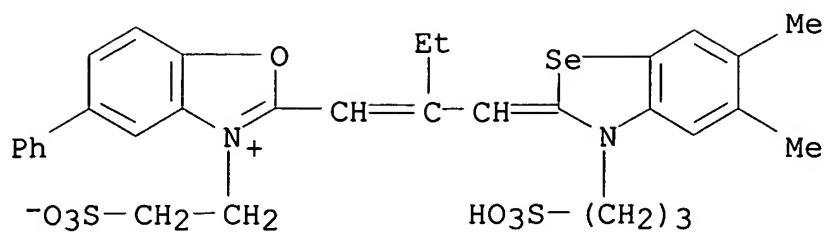
CN Benzoxazolium, 2-[2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 143314-63-0 HCAPLUS

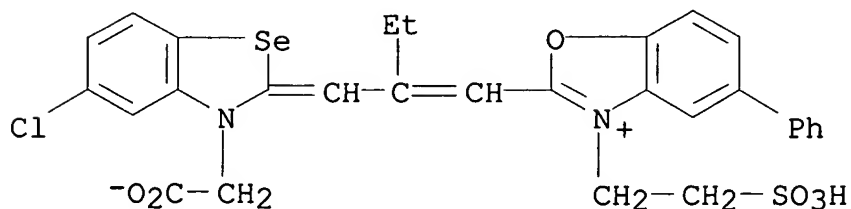
CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 143314-64-1 HCAPLUS

CN Benzoxazolium, 2-[2-[[3-(carboxymethyl)-5-chloro-2(3H)-benzoselenazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, lithium salt (9CI) (CA INDEX NAME)



● Li

IC ICM G03C001-14

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 39201-42-8 61919-60-6 68392-94-9

75260-71-8 81645-24-1 85238-31-9

93054-11-6 114175-87-0 138551-18-5

143118-07-4 143118-08-5 143128-80-7

143314-62-9 143314-63-0 143314-64-1

(photog. spectral sensitizing dye, for improved color reproducibility)

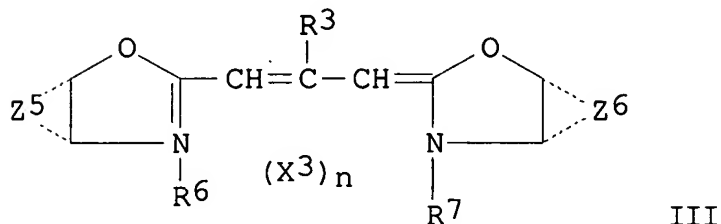
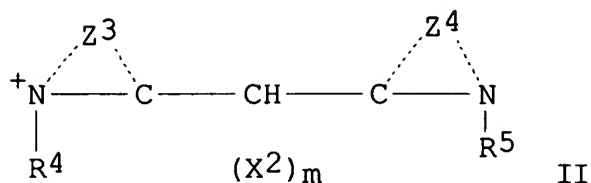
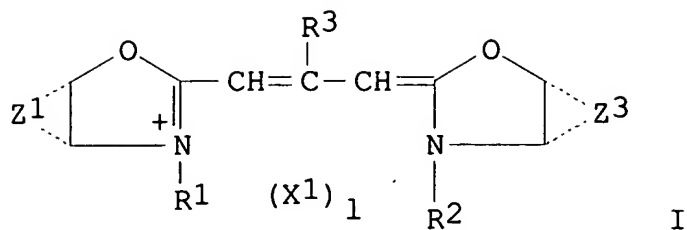
L29 ANSWER 28 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

USHA SHRESTHA REM 4B28

ACCESSION NUMBER: 1992:540499 HCAPLUS  
DOCUMENT NUMBER: 117:140499  
TITLE: Color photographic material using spectral sensitizers  
INVENTOR(S): Okusa, Hiroshi; Kagawa, Nobuaki; Tanaka, Mari  
PATENT ASSIGNEE(S): Konica K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. ----- -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 04050940	A2	19920219 /	JP 1990-158367	1990 0615
PRIORITY APPLN. INFO.: JP 1990-158367				1990 0615

GI



AB In the title full-color photog. material, the Ag halide grains contained in  $\geq 1$  **green-sensitive** emulsion layers are spectrally sensitized by  $\geq 1$  I,  $\geq 1$  II and  $\geq 1$  III [R1,2,4-7 = alkyl, alkenyl; R3,8 = H, alkyl, aryl; X1-3 = anions with counter charge; l, m, n =  $\geq 1$  to neutralize the mol. net charge; Z1,2 = atoms required to complete benzoxazole; Z3,4 = atoms required to complete pyrroline, pyridine, quinoline, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, thiazoline, thiazole, benzothiazole, naphthothiazole, (benzo)selenazole, naphthoselenazole; Z5,6 = atoms to form naphthothiazole]. This photog. material shows good color reproducibility and improved long-term stability.

IT 39201-42-8 51588-61-5 61919-60-6  
 63148-87-8 68392-94-9 75260-71-8  
 92771-39-6 98205-32-4 121168-07-8  
 121168-08-9 124905-13-1 139717-60-5  
 143118-07-4 143118-12-1 143128-80-7  
 143314-66-3

(photog. spectral sensitizing dye, for improved color

reproducibility)

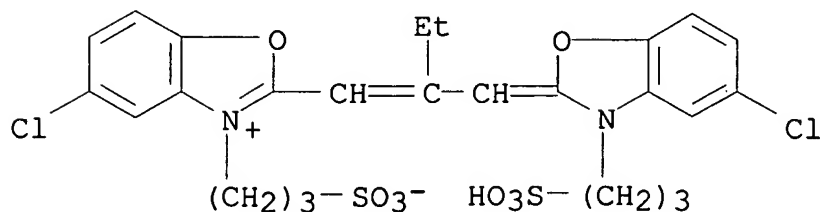
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

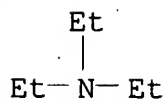
CMF C25 H26 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

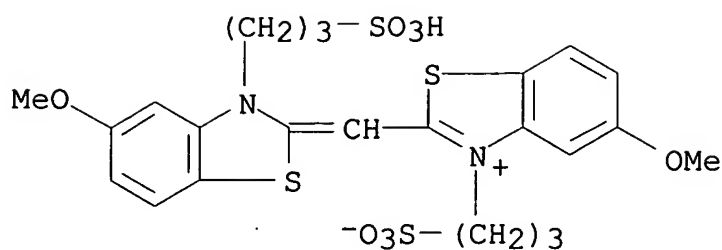
CMF C6 H15 N



RN 51588-61-5 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

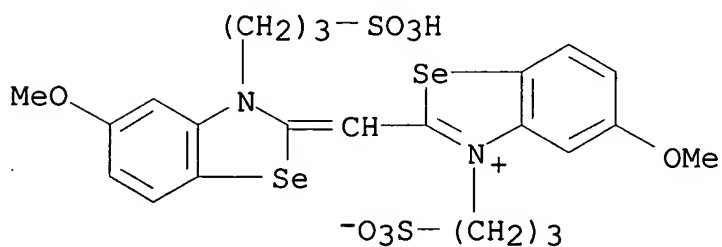




● Na

RN 61919-60-6 HCAPLUS

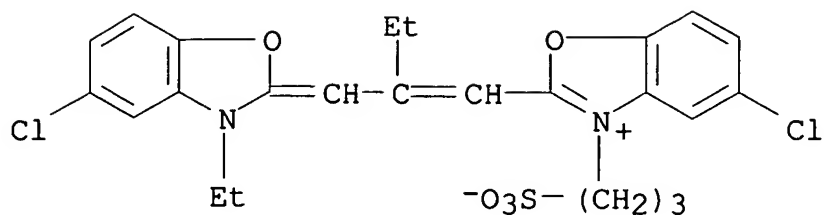
CN Benzoselenazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 63148-87-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



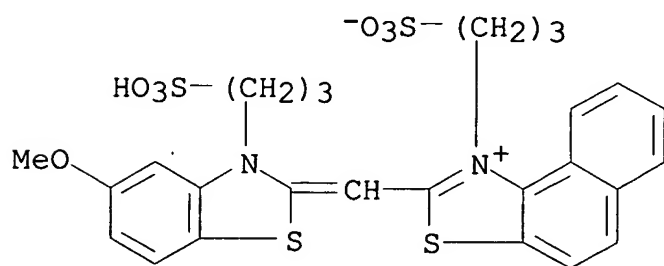
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

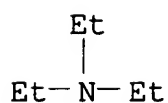
CMF C26 H26 N2 O7 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 75260-71-8 HCAPLUS

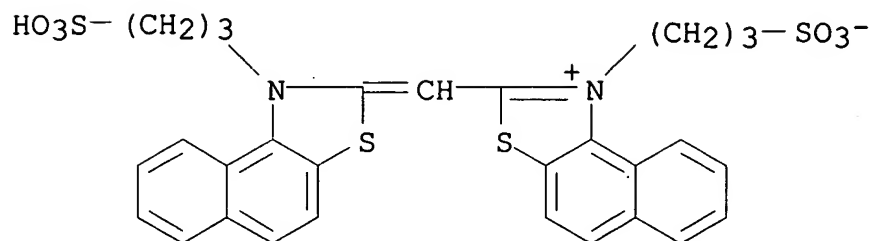
CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner

salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70211-20-0

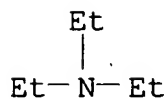
CMF C29 H26 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



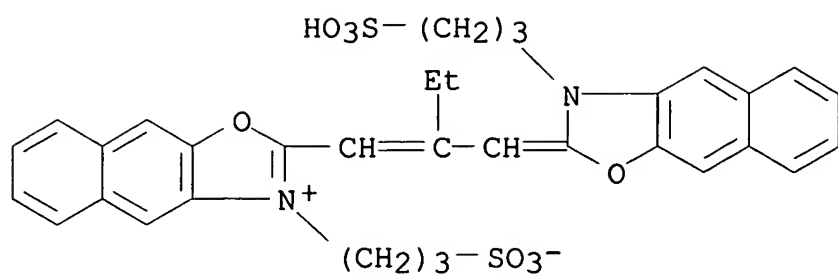
RN 92771-39-6 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29419-49-6

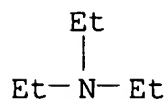
CMF C33 H32 N2 O8 S2



CM 2

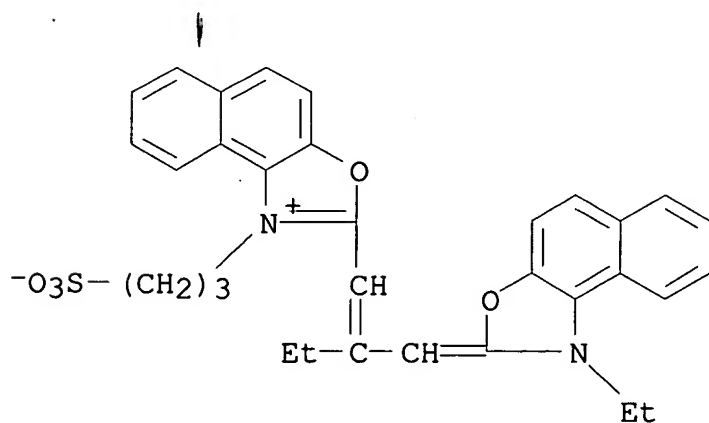
CRN 121-44-8

CMF C6 H15 N



RN 98205-32-4 HCAPLUS

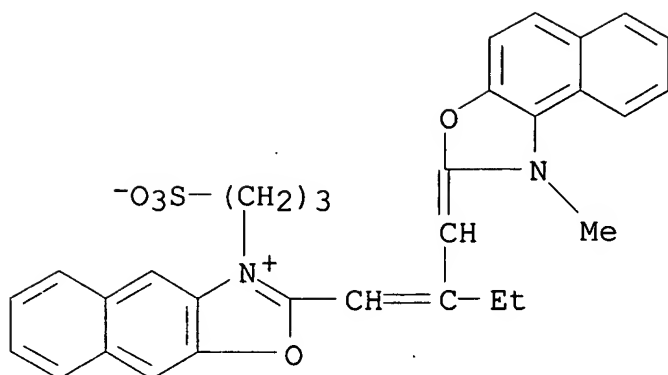
CN Naphth[1,2-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



RN 121168-07-8 HCAPLUS

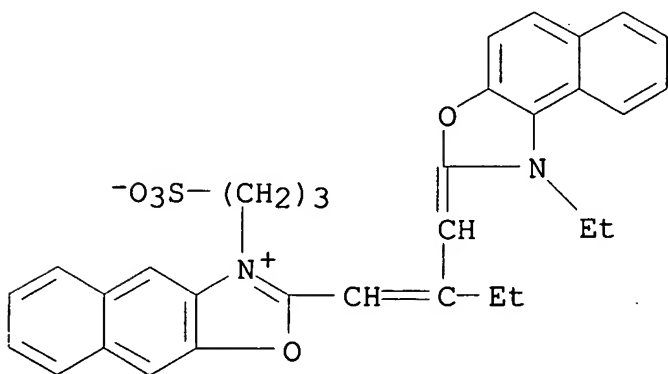
CN Naphth[2,3-d]oxazolium, 2-[2-[(1-methylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI)

(CA INDEX NAME)



RN 121168-08-9 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



RN 124905-13-1 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

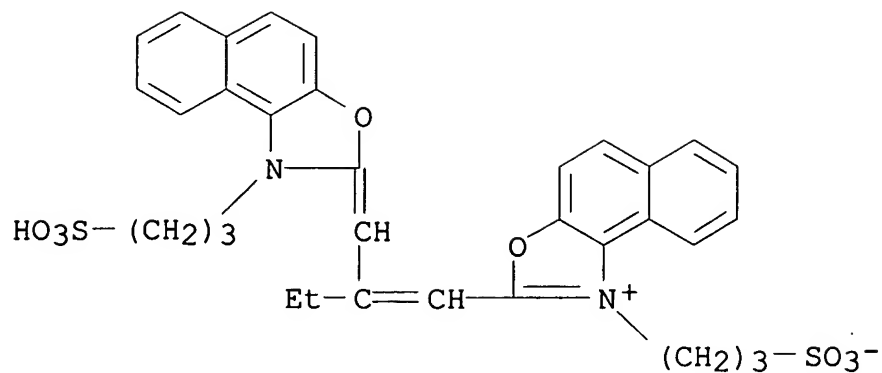
CM 1

CRN 28317-17-1

CMF C33 H32 N2 O8 S2

USHA SHRESTHA

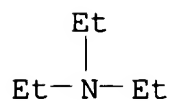
REM 4B28



CM 2

CRN 121-44-8

CMF C6 H15 N



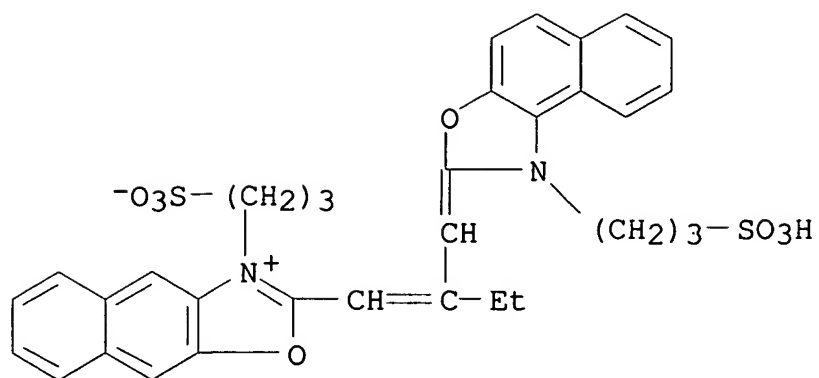
RN 139717-60-5 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129990-46-1

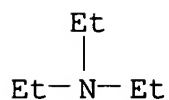
CMF C33 H32 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



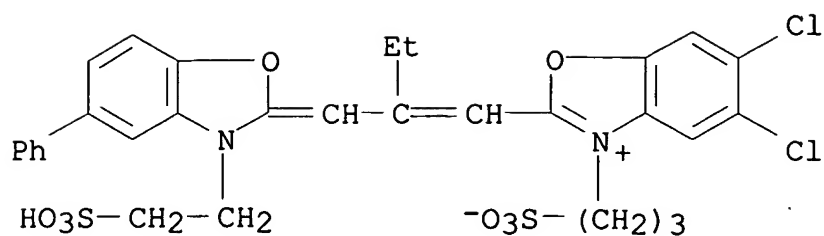
RN 143118-07-4 HCAPLUS

CN Benzoxazolium, 5,6-dichloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 143118-06-3

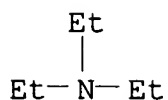
CMF C30 H28 Cl2 N2 O8 S2



CM 2

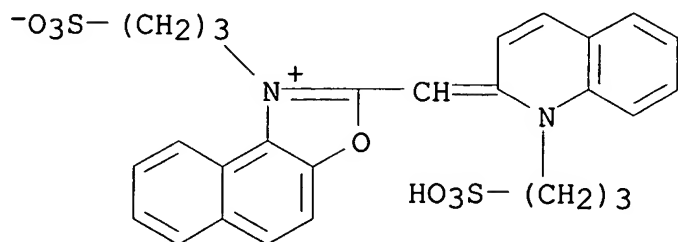
CRN 121-44-8

CMF C6 H15 N



RN 143118-12-1 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)-2(1H)-quinolinylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



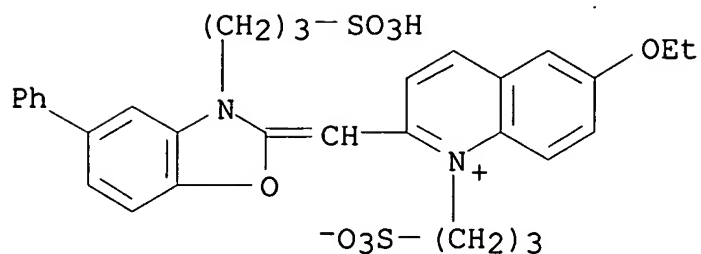
● Na

RN 143128-80-7 HCAPLUS

CN Quinolinium, 6-ethoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, lithium



salt (9CI) (CA INDEX NAME)



● Li

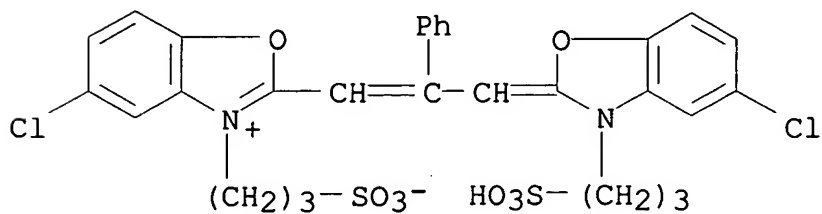
RN 143314-66-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]-2-phenyl-1-propenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 143314-65-2

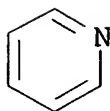
CMF C29 H26 Cl2 N2 O8 S2



CM 2

CRN 110-86-1

CMF C5 H5 N



IC ICM G03C001-14  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 39201-42-8 51588-61-5 61919-60-6  
63148-87-8 68392-94-9 75260-71-8  
92771-39-6 98205-32-4 121168-07-8  
121168-08-9 124905-13-1 139717-60-5  
143118-07-4 143118-12-1 143128-80-7  
143314-66-3  
(photog. spectral sensitizing dye, for improved color  
reproducibility)

L29 ANSWER 29 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1992:521407 HCAPLUS  
DOCUMENT NUMBER: 117:121407  
TITLE: Color photographic material using spectral  
sensitizers  
INVENTOR(S): Okusa, Hiroshi; Yabuchi, Katsuya; Kagawa,  
Nobuaki  
PATENT ASSIGNEE(S): Konica K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

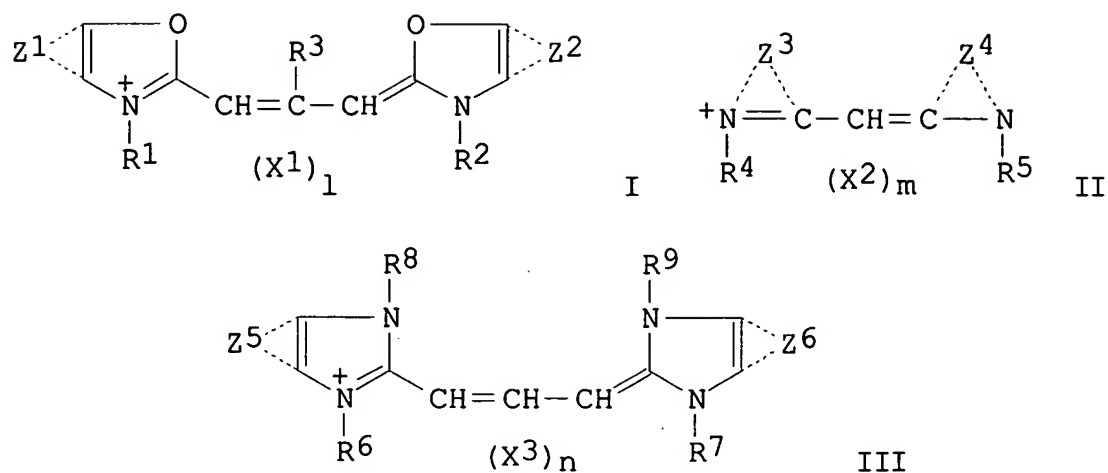
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04051040	A2	19920219 /	JP 1990-160538	

1990  
0618

PRIORITY APPLN. INFO.: JP 1990-160538

1990  
0618

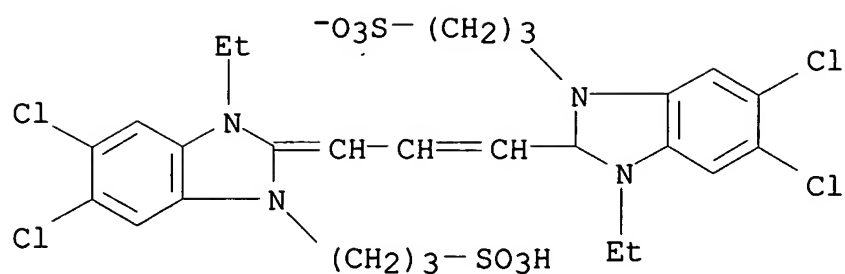
GI



AB In a color photog. material, the Ag halide grains contained in  $\geq 1$  **green-sensitive** emulsion layer are spectrally sensitized by  $\geq 1$  I,  $\geq 1$  II, and  $\geq 1$  III [R1, R2, R4-7 = alkyl, alkenyl; R3 = H, alkyl, aryl; R8, R9 = alkyl, alkenyl, aryl; Z1, Z2 = atoms required to complete a benzoxazole ring; Z3, R4 = atoms required to complete a pyrroline, pyridine, quinoline, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, thiazoline, thiazole, benzothiazole, naphthothiazole, (benzo)selenazole, or naphthoselenazole ring; Z5, Z6 = atoms to form a benzimidazole ring]. The photog. material shows good color reproducibility and improved long-term stability.

IT 28272-54-0 33628-08-9 35857-18-2  
39201-42-8 63148-90-3 68392-94-9  
75260-71-8 94009-92-4 114175-87-0  
143118-07-4 143118-08-5 143118-09-6  
143118-10-9 143118-11-0 143118-12-1  
143128-79-4 143128-80-7 143320-62-1  
(photoq. spectral sensitizer)

```
RN 28272-54-0 HCAPLUS
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-
dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-
ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX
NAME)
```

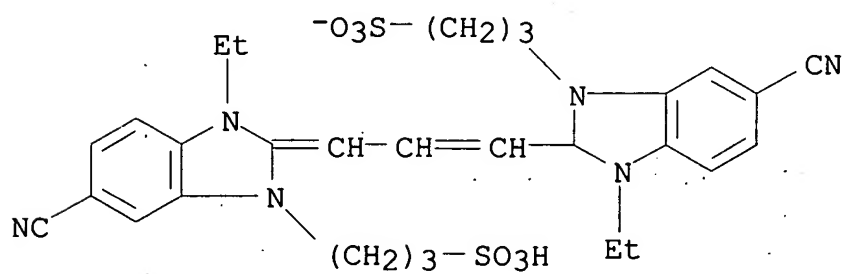


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 33628-08-9 HCAPLUS

CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

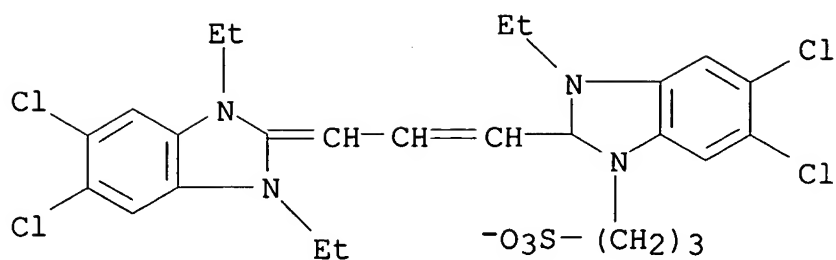


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 35857-18-2 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

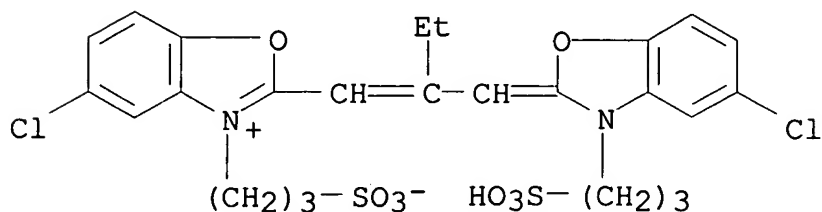
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

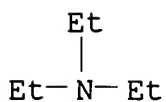
CMF C25 H26 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 63148-90-3 HCAPLUS

USHA SHRESTHA

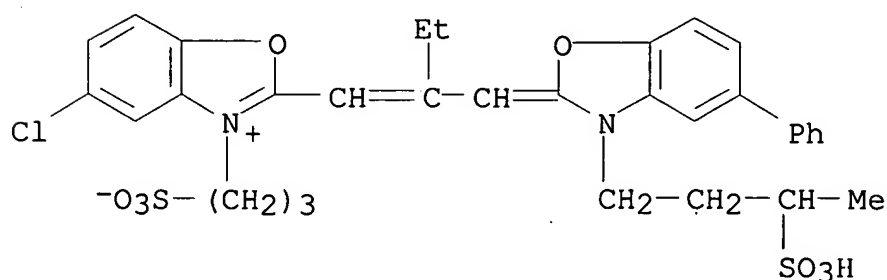
REM 4B28

CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfobutyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 52049-36-2

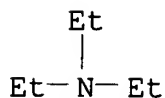
CMF C32 H33 Cl N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



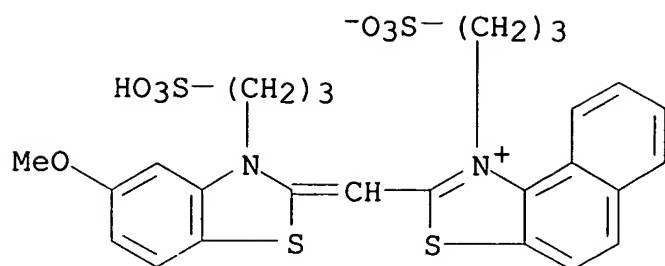
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolyliidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

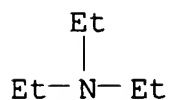
CMF C26 H26 N2 O7 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



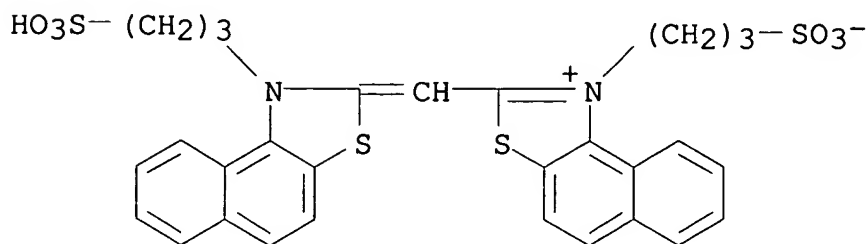
RN 75260-71-8 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70211-20-0

CMF C29 H26 N2 O6 S4



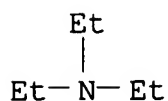
USHA SHRESTHA

REM 4B28

CM 2

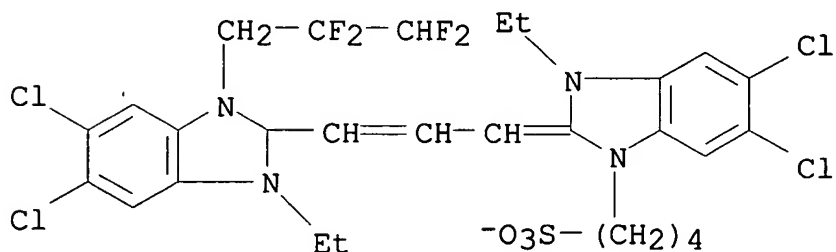
CRN 121-44-8

CMF C6 H15 N



RN 94009-92-4 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfo-butyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(2,2,3,3-tetrafluoropropyl)-, inner salt (9CI) (CA INDEX NAME)

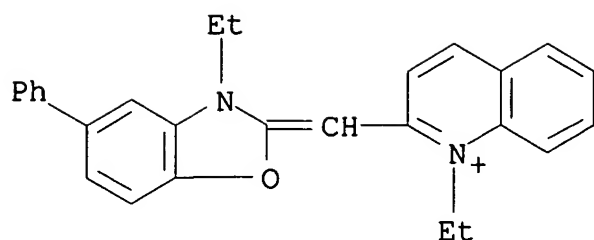


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 114175-87-0 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)





● I<sup>-</sup>

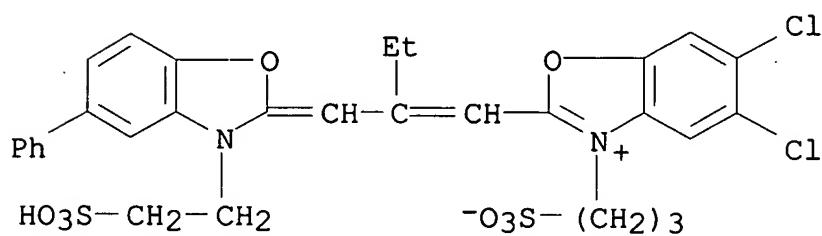
RN 143118-07-4 HCAPLUS

CN Benzoxazolium, 5,6-dichloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 143118-06-3

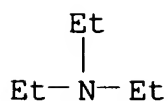
CMF C30 H28 Cl2 N2 O8 S2



CM 2

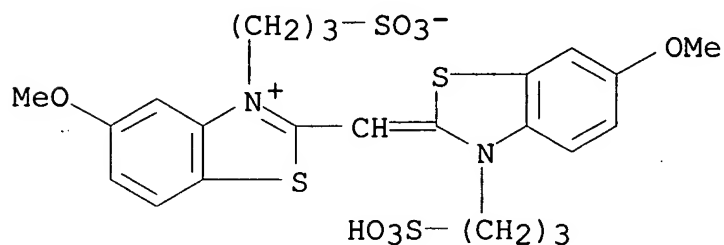
CRN 121-44-8

CMF C6 H15 N



RN 143118-08-5 HCAPLUS

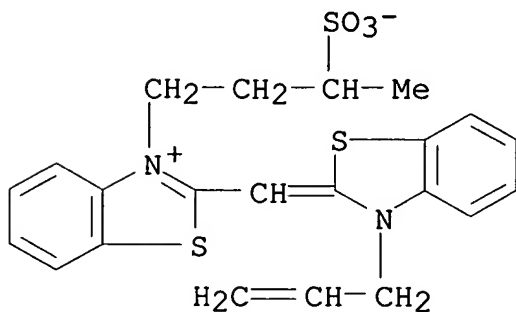
CN Benzothiazolium, 5-methoxy-2-[[6-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 143118-09-6 HCAPLUS

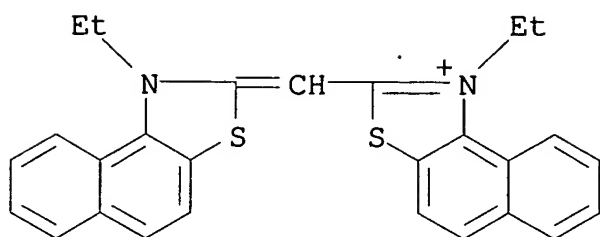
CN Benzothiazolium, 2-[[3-(2-propenyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 143118-10-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-ethyl-2-[(1-ethylnaphtho[1,2-d]thiazol-

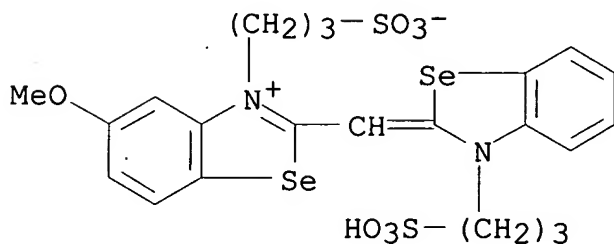
2(1H)-ylidene)methyl]-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 143118-11-0 HCAPLUS

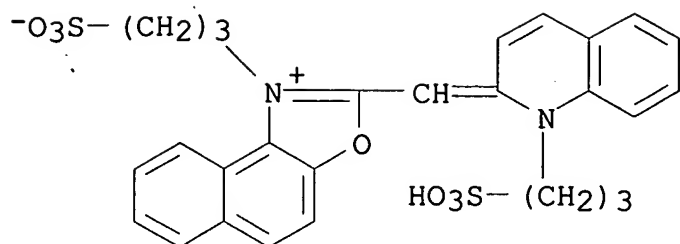
CN Benzoselenazolium, 5-methoxy-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 143118-12-1 HCAPLUS

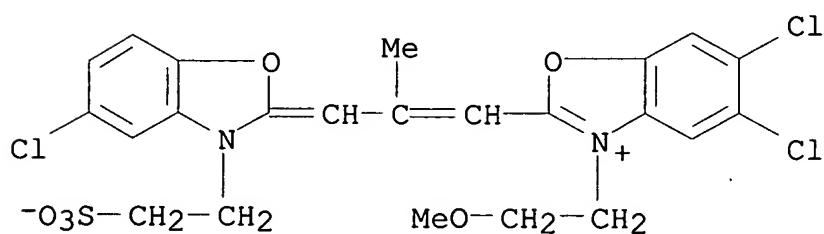
CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)-2(1H)-quinolinylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

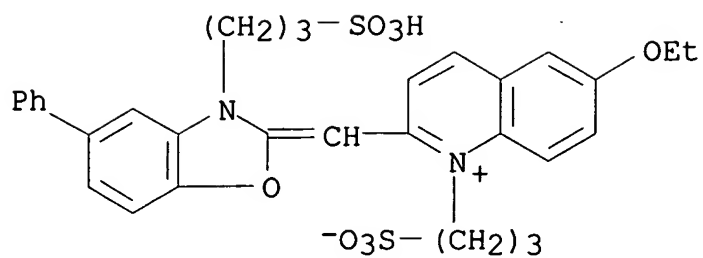
RN 143128-79-4 HCAPLUS

CN Benzoxazolium, 5,6-dichloro-2-[3-[5-chloro-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]-2-methyl-1-propenyl]-3-(2-methoxyethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 143128-80-7 HCAPLUS

CN Quinolinium, 6-ethoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, lithium salt (9CI) (CA INDEX NAME)

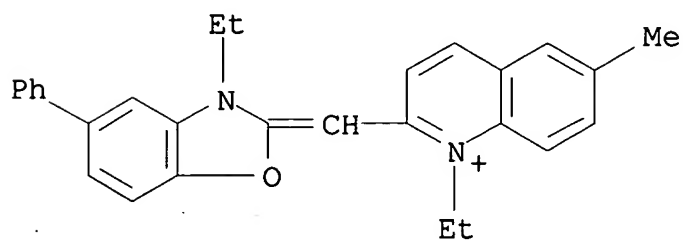


● Li

RN 143320-62-1 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[(3-ethyl-5-phenyl-2(3H)-  
 benzoxazolylidene)methyl]-6-methyl-, tetrafluoroborate(1-) (9CI).  
 (CA INDEX NAME)

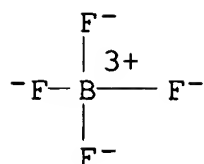
CM 1

CRN 143320-61-0  
 CMF C28 H27 N2 O



CM 2

CRN 14874-70-5  
 CMF B F4  
 CCI CCS



IC ICM G03C001-14  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 28272-54-0 33628-08-9 35857-18-2  
 39201-42-8 63148-90-3 68392-94-9  
 75260-71-8 94009-92-4 114175-87-0  
 143118-07-4 143118-08-5 143118-09-6  
 143118-10-9 143118-11-0 143118-12-1  
 143128-79-4 143128-80-7 143320-62-1  
 (photog. spectral sensitizer)

L29 ANSWER 30 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1992:417198 HCAPLUS  
 DOCUMENT NUMBER: 117:17198  
 TITLE: Silver halide color photographic material  
 INVENTOR(S): Okusa, Hiroshi; Yabuchi, Katsuya; Kagawa,  
 Nobuaki  
 PATENT ASSIGNEE(S): Konica K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 04051148	A2	19920219	JP 1990-160540	1990 0618

PRIORITY APPLN. INFO.: JP 1990-160540  
 1990  
 0618

AB In the title material comprising a support having thereon one or  
 more blue-sensitive Ag halide emulsion layers, **green-**

**sensitive** Ag halide emulsion layers, and red-sensitive Ag halide emulsion layers, at least one of the **green-sensitive** Ag halide emulsion layers has a reflection spectrum, the wavelength of one of the maximum absorption peaks is 500 to 540 nm, and the wavelength of the other is 540 to 580 nm. The material contains sensitizing dyes and gives excellent color reproduction.

IT 28413-71-0 33628-08-9 39201-42-8  
68162-29-8 92771-39-6 121850-78-0  
129990-51-8 141891-84-1 141891-85-2  
141891-86-3 141891-88-5

(photog. sensitizing dye)

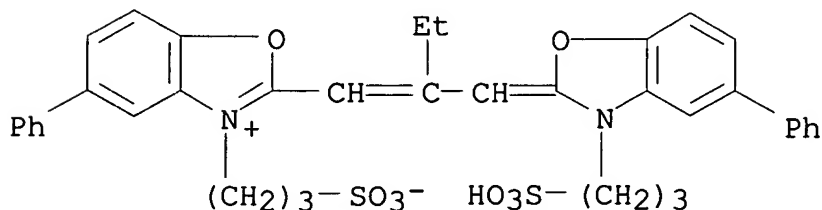
RN 28413-71-0 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29133-39-9

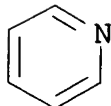
CMF C37 H36 N2 O8 S2



CM 2

CRN 110-86-1

CMF C5 H5 N

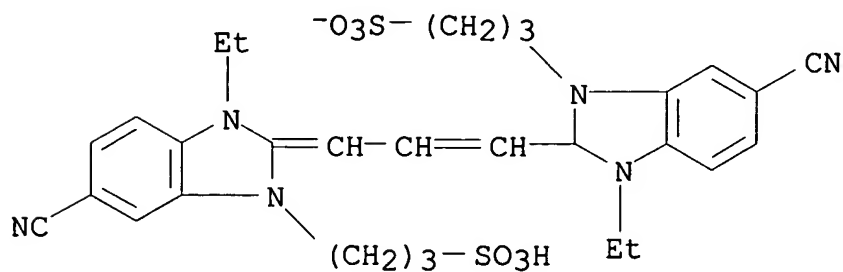


RN 33628-08-9 HCAPLUS

USHA SHRESTHA

REM 4B28

CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

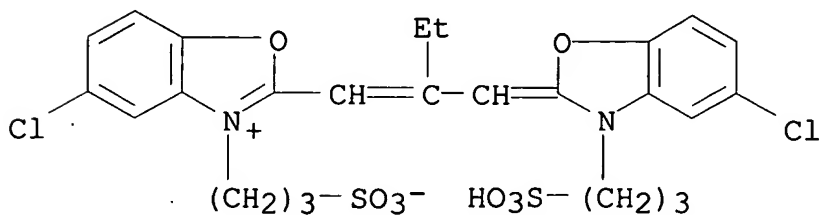
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

CMF C25 H26 Cl2 N2 O8 S2

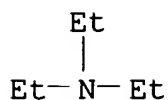


CM 2

CRN 121-44-8

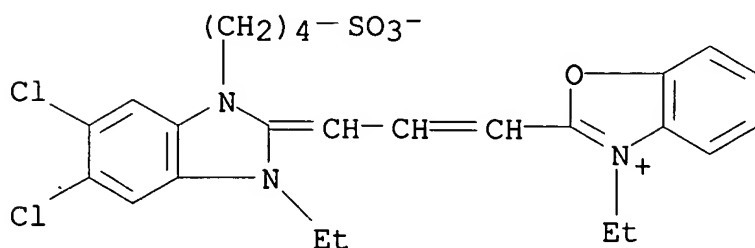
CMF C6 H15 N





RN 68162-29-8 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



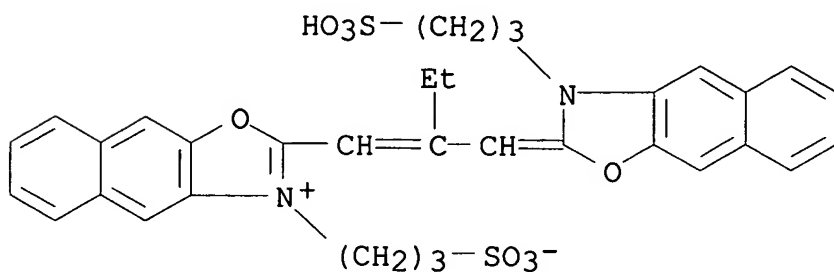
RN 92771-39-6 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29419-49-6

CMF C33 H32 N2 O8 S2



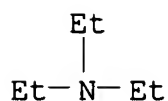
USHA SHRESTHA

REM 4B28

CM 2

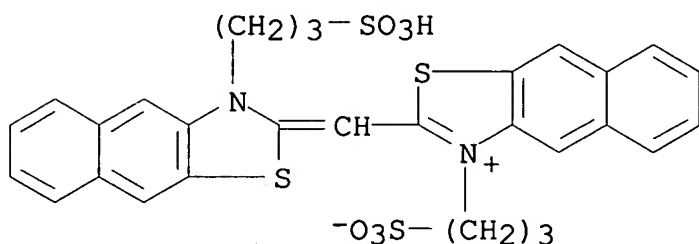
CRN 121-44-8

CMF C6 H15 N



RN 121850-78-0 HCAPLUS

CN Naphtho[2,3-d]thiazolium, 3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)naphtho[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



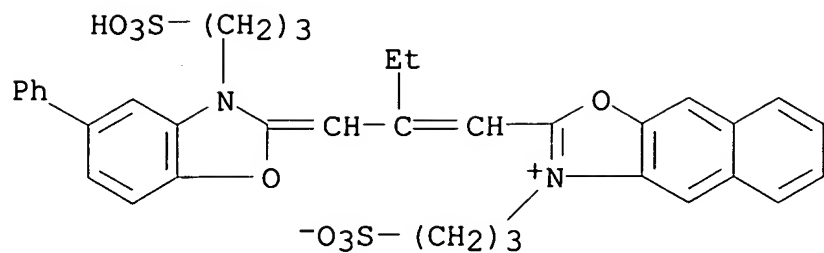
RN 129990-51-8 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

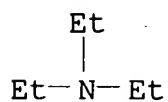
CRN 129990-50-7

CMF C35 H34 N2 O8 S2



CM 2

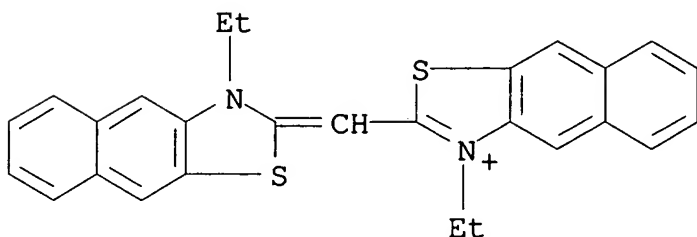
CRN 121-44-8  
CMF C6 H15 N



RN 141891-84-1 HCAPLUS  
CN Naphtho[2,3-d]thiazolium, 3-ethyl-2-[(3-ethylnaphtho[2,3-d]thiazol-2(3H)-ylidene)methyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

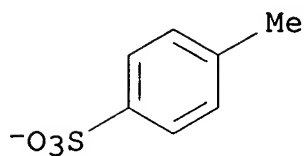
CM 1

CRN 141891-83-0  
CMF C27 H23 N2 S2

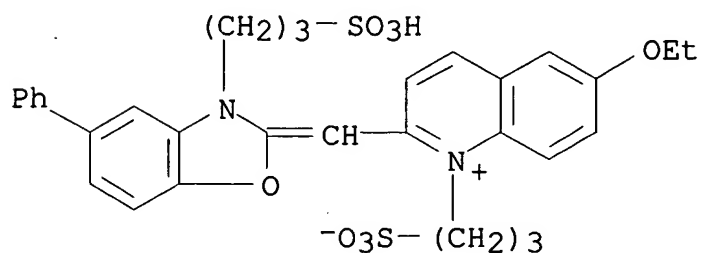


CM 2

CRN 16722-51-3  
CMF C7 H7 O3 S



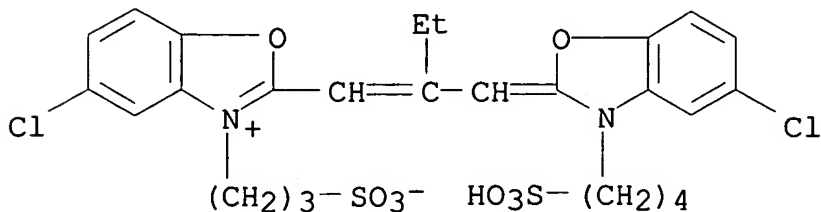
RN 141891-85-2 HCAPLUS  
CN Quinolinium, 6-ethoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



RN 141891-86-3 HCAPLUS  
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 34141-95-2  
CMF C26 H28 Cl2 N2 O8 S2

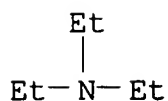


USHA SHRESTHA REM 4B28

CM 2

CRN 121-44-8

CMF C6 H15 N



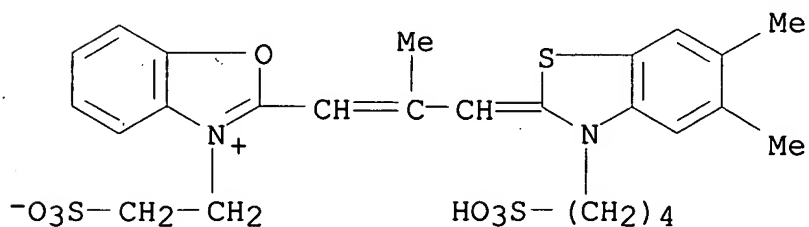
RN 141891-88-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-(2-sulfoethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 141891-87-4

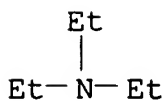
CMF C26 H30 N2 O7 S3



CM 2

CRN 121-44-8

CMF C6 H15 N

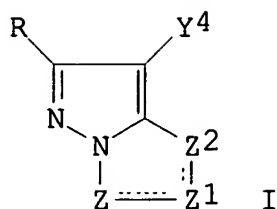


IC ICM G03C007-20  
 ICS G03C001-12; G03C007-392  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 41  
 IT **28413-71-0 33628-08-9 39201-42-8**  
**68162-29-8 92771-39-6 121850-78-0**  
**129990-51-8 141891-84-1 141891-85-2**  
**141891-86-3 141891-88-5**  
 (photog. sensitizing dye)

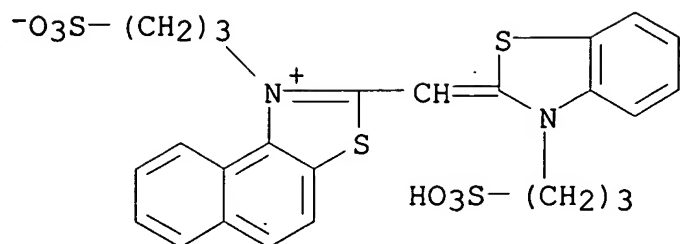
L29 ANSWER 31 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1992:224550 HCAPLUS  
 DOCUMENT NUMBER: 116:224550  
 TITLE: Silver halide color photographic material with  
 improved color and tone reproduction  
 INVENTOR(S): Waki, Kokichi; Asami, Masahiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03138643	A2	19910613	JP 1989-278015	1989 1025
JP 2614120	B2	19970528		
US 5084374	A	19920128	US 1990-598938	1990 1017
PRIORITY APPLN. INFO.:			JP 1989-278015	A 1989 1025

GI



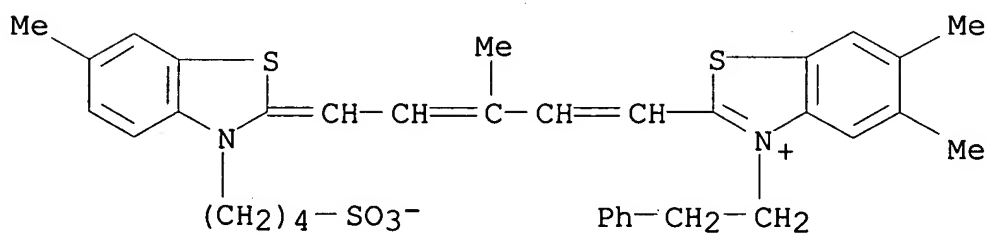
- AB In a Ag halide color photog. material having a red-sensitive Ag halide emulsion layer (A), a **green-sensitive** Ag halide emulsion layer (B), and a blue-sensitive Ag halide emulsion layer (C), the Ag halide emulsion of the emulsion layers A, B, and C is the AgBr emulsion having  $\geq 95$  mol% AgCl content and furthermore the A and/or B Ag halide emulsion is spectrally sensitized in the blue wavelength region to satisfy the following equations  $1.8 \leq BS(C)-BS(A) \leq 2.4$  and  $1.4 \leq BS(C)-BS(B) \leq 2.0$  [BS(C), BS(A), BS(B) = blue-sensitivity of the A, B, and C emulsion layer expressed as  $\log (1/\text{exposure})$  where the cyan, magenta, and yellow optical d. = 1] in the grain formation and/or chemical sensitization step, while in the emulsion layers A and B  $\geq 2$  Ag halide emulsions are mixed to set the  $\gamma$  values of the emulsion layers A and B 0.6-1.3 times greater than that of the emulsion layer C. Preferably the photog. material contains a pyrazoloazole-series coupler [I; R = H, substituent; Y4 = H, leaving group; Z, Z1, Z2 = (un)substituted methine, N, NH; one of Z-Z1, Z1-Z2 bonds = double bond and the other = single bond; when the Z-Z1 bond = double bond, it is optionally a part of an aromatic ring; I optionally forming  $\geq 2$  polymer via R, Y4 or substituted methine in Z, Z1, or Z2]. This photog. material provides color reproduction of details in from low to high d. parts and subtle tone of the original color in the high d. region and sharp original color with little turbidity.
- IT **63149-36-0 63737-55-3 68392-94-9**  
**90901-34-1 102731-88-4**  
 (photog. spectral sensitizer)
- RN 63149-36-0 HCAPLUS
- CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylylidene]methyl]-, inner salt, sodium salt (9CI)  
 (CA INDEX NAME)



● Na

RN 63737-55-3 HCAPLUS

CN Benzothiazolium, 5,6-dimethyl-2-[3-methyl-5-[6-methyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1,3-pentadienyl]-3-(2-phenylethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 68392-94-9 HCAPLUS

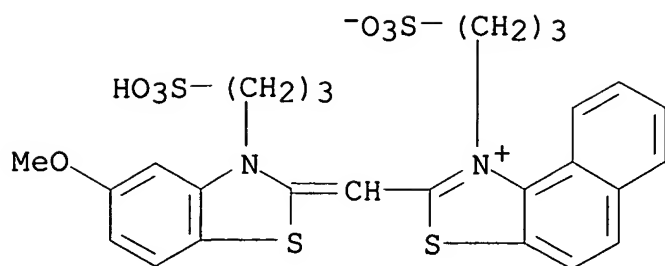
CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

CMF C26 H26 N2 O7 S4

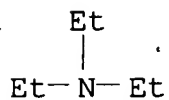




CM 2

CRN 121-44-8

CMF C6 H15 N



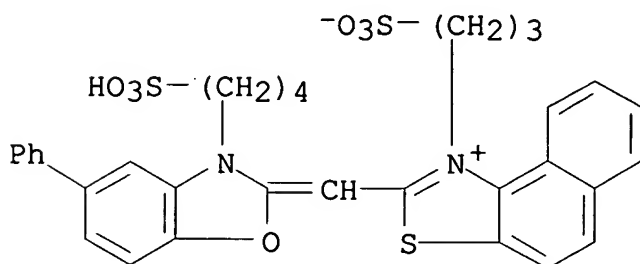
RN 90901-34-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 90901-33-0

CMF C32 H30 N2 O7 S3



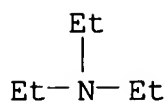
USHA SHRESTHA

REM 4B28

CM 2

CRN 121-44-8

CMF C6 H15 N



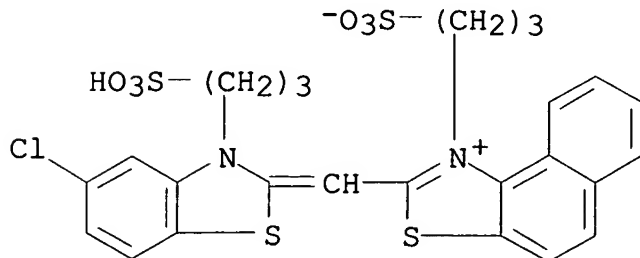
RN 102731-88-4 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 67132-51-8

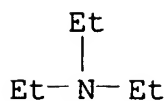
CMF C25 H23 Cl N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM G03C007-20

ICS G03C001-035; G03C007-26  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 20517-94-6 **63149-36-0 63737-55-3**  
**68392-94-9 90901-34-1 102731-88-4**  
 117633-60-0 139150-21-3  
 (photog. spectral sensitizer)

L29 ANSWER 32 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1992:224544 HCAPLUS  
 DOCUMENT NUMBER: 116:224544  
 TITLE: Color photographic light-sensitive material  
 offering excellent hue reproduction  
 INVENTOR(S): Fukazawa, Fumie; Irie, Yasushi; Shimazaki,  
 Hiroshi; Yabuuchi, Katuya; Shimba, Satoru  
 PATENT ASSIGNEE(S): Konica Co., Japan  
 SOURCE: Eur. Pat. Appl., 135 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 434043	A1	19910626	EP 1990-124806	1990 1219
R: DE, GB, IT, NL JP 03194546	A2	19910826	JP 1989-334481	1989 1222
JP 3020105 JP 03264954	B2 A2	20000315 19911126	JP 1990-63871	1990 0314
JP 03290658	A2	19911220	JP 1990-92721	1990 0407
US 5180657	A	19930119	US 1990-629598	1990 1218
PRIORITY APPLN. INFO.:			JP 1989-334481	A 1989

1222

JP 1990-63871 A  
1990  
0314

JP 1990-92721 A  
1990  
0407

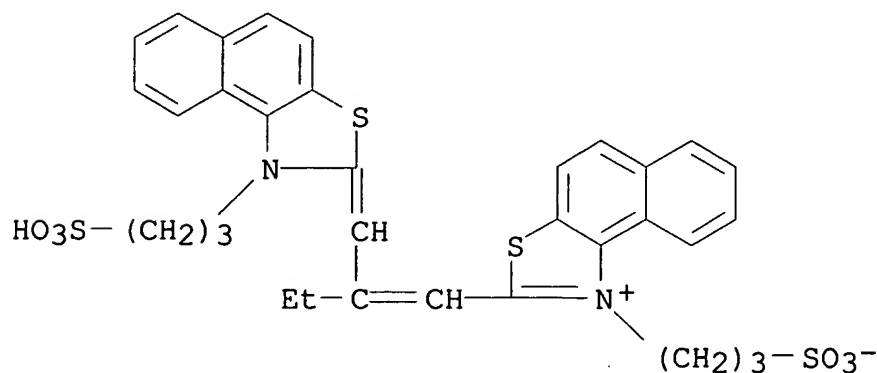
OTHER SOURCE(S): MARPAT 116:224544

AB A Ag halide color photog. material is described having maximum spectral sensitivity ( $\lambda_B$ ) of the blue-sensitive emulsion layer at 410-470 nm and sensitivity at 480 nm  $\leq 1/2$  that at  $\lambda_B$ . Preferably, the maximum sensitivity wavelength ( $\lambda_G$ ) of the **green-sensitive** layer is at 530-560 nm and its sensitivity at 500 nm is  $\geq 1/4$  that at  $\lambda_G$ . The maximum sensitivity wavelength of the red-sensitive layer is at 595-625 nm and its maximum sensitivity at 400-480 nm is  $\geq 1.5\%$  of the sensitivity of the blue-sensitive layer at  $\lambda_B$ . The material provides high chroma and excellent hue reproduction

IT **4622-66-6 23568-98-1 33628-03-4**  
**33628-08-9 34141-97-4 63148-96-9**  
**68392-94-9 85238-31-9 114561-83-0**  
**139453-99-9 141231-81-4 141231-82-5**  
(photog. sensitizer)

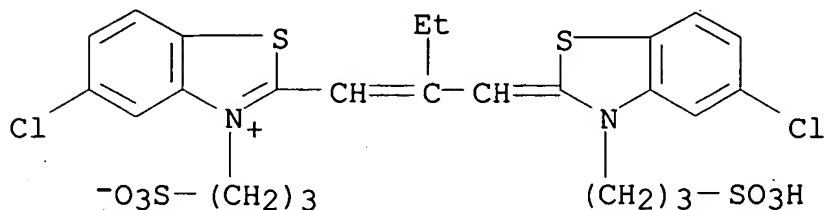
RN 4622-66-6 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt (9CI) (CA INDEX NAME)



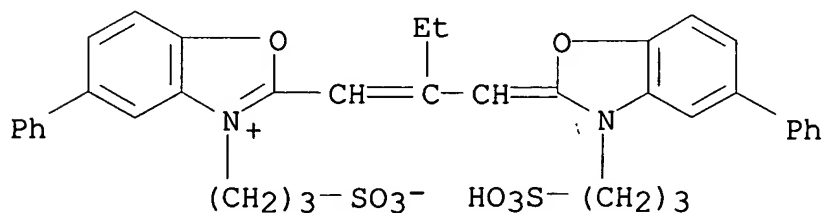
RN 23568-98-1 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 33628-03-4 HCAPLUS

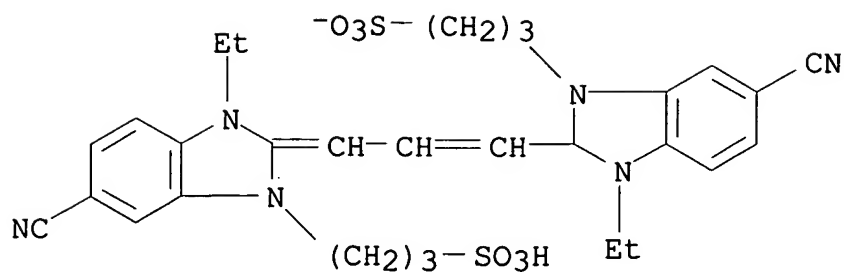
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 33628-08-9 HCAPLUS

CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

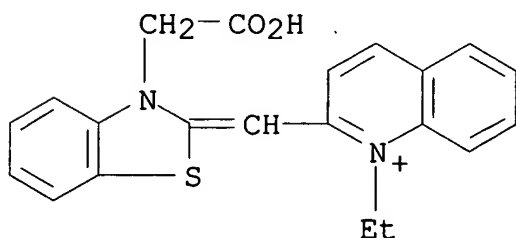


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 34141-97-4 HCAPLUS

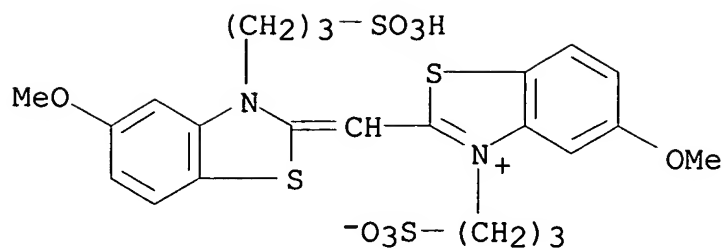
CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 63148-96-9 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



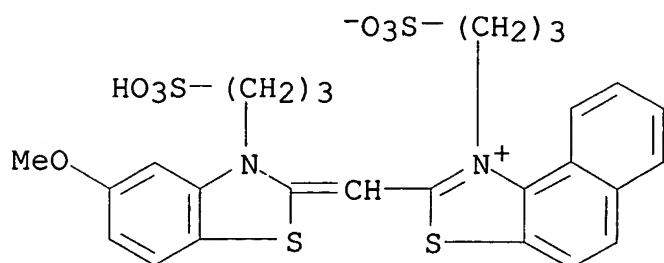
RN 68392-94-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 68392-93-8

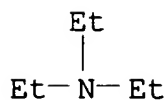
CMF C26 H26 N2 O7 S4



CM 2

CRN 121-44-8

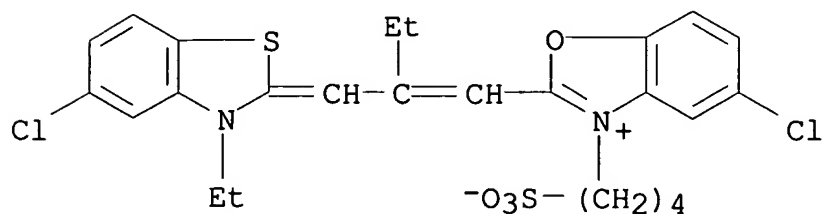
CMF C6 H15 N



RN 85238-31-9 HCAPLUS

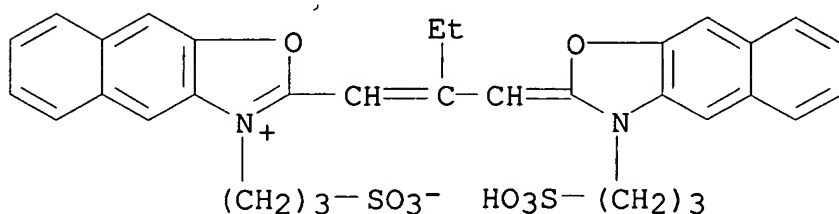
CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-

benzothiazolylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 114561-83-0 HCAPLUS

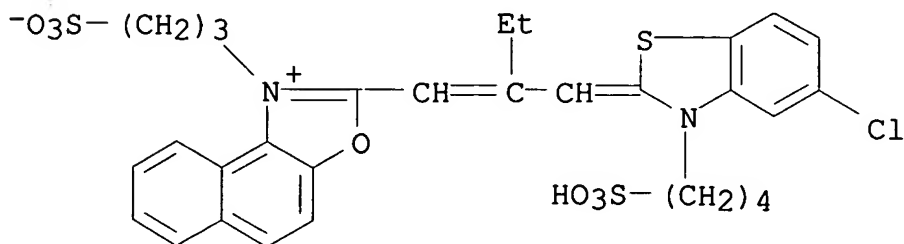
CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 139453-99-9 HCAPLUS

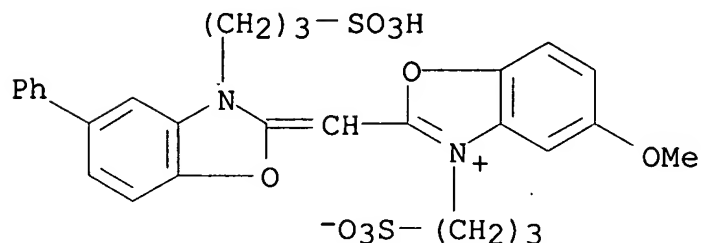
CN Naphth[1,2-d]oxazolium, 2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)





RN 141231-81-4 HCAPLUS

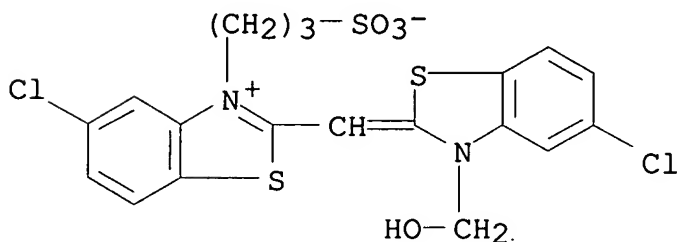
CN Benzoxazolium, 5-methoxy-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolyliidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 141231-82-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(hydroxymethyl)-2(3H)-benzothiazolyliidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-30

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **4622-66-6 23568-98-1 33628-03-4**  
**33628-08-9 34141-97-4 63148-96-9**  
**68392-94-9 85238-31-9 114561-83-0**  
**139453-99-9 141231-81-4 141231-82-5**  
 (photog. sensitizer)

L29 ANSWER 33 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

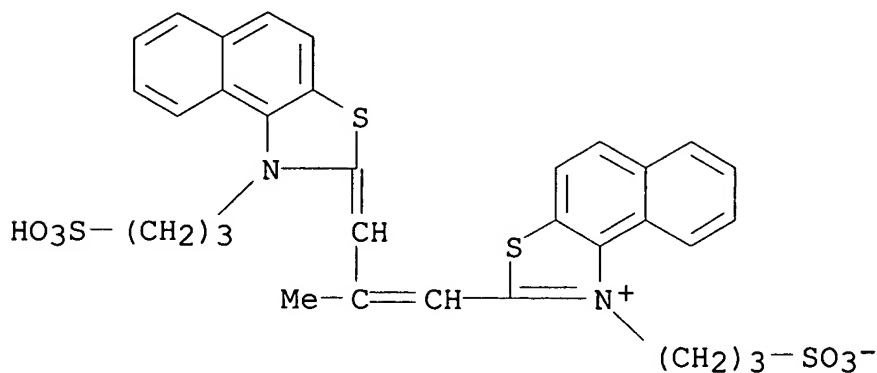
USHA SHRESTHA REM 4B28

ACCESSION NUMBER: 1992:224543 HCAPLUS  
 DOCUMENT NUMBER: 116:224543  
 TITLE: Color photographic material excellent in color reproduction  
 INVENTOR(S): Fukazawa, Fumie; Yabuuchi, Katuya; Ohtani, Hirofumi  
 PATENT ASSIGNEE(S): Konica Co., Japan  
 SOURCE: Eur. Pat. Appl., 70 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 434044	A1	19910626	EP 1990-124807	1990 1219
R: DE, GB, IT, NL JP 03194547	A2	19910826	JP 1989-334482	1989 1222
US 1196	H1	19930601	US 1990-628566	1990 1217
PRIORITY APPLN. INFO.:			JP 1989-334482	A 1989 1222

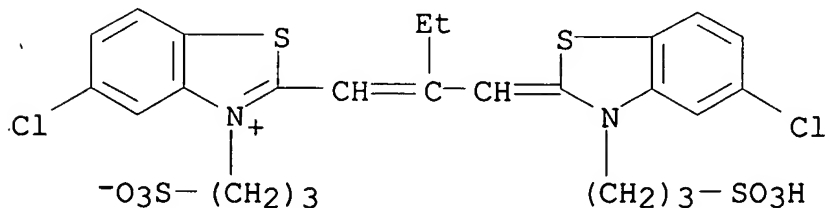
OTHER SOURCE(S): MARPAT 116:224543  
 AB The Ag halide color photog. material has: maximum spectral sensitivity of the red-sensitive emulsion layer at 595-625 nm; maximum spectral sensitivity of the **green-sensitive** emulsion layer at 530-560 nm ( $\lambda_G$ ); and sensitivity of the **green-sensitive** emulsion layer at 500 nm  $\geq 1/4$  the sensitivity at  $\lambda_G$ . The material has high saturation and excellent hue reproduction  
 IT **16704-72-6 23568-98-1 33628-03-4**  
**33628-08-9 34141-97-4 85238-31-9**  
**114561-83-0 139453-99-9**  
 (photog. sensitizer)  
 RN 16704-72-6 HCAPLUS  
 CN Naphtho[1,2-d]thiazolium, 2-[2-methyl-3-[3-(3-

sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



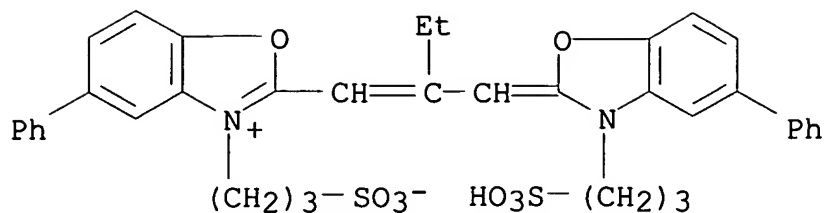
RN 23568-98-1 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



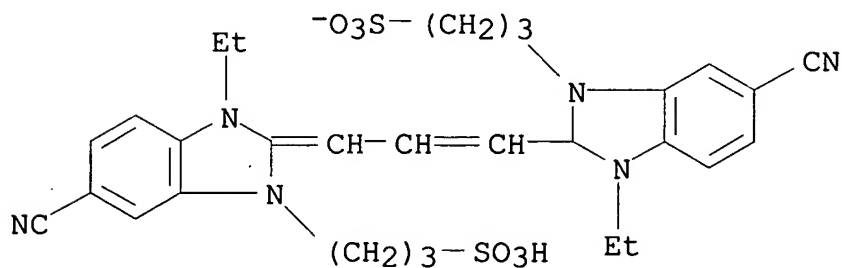
RN 33628-03-4 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



RN 33628-08-9 HCAPLUS

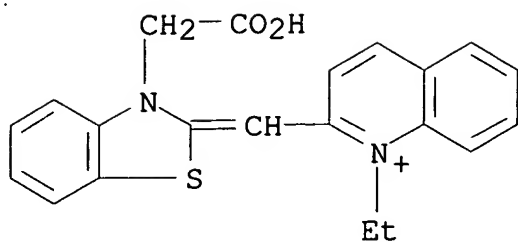
CN 1H-Benzimidazolium, 5-cyano-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 34141-97-4 HCAPLUS

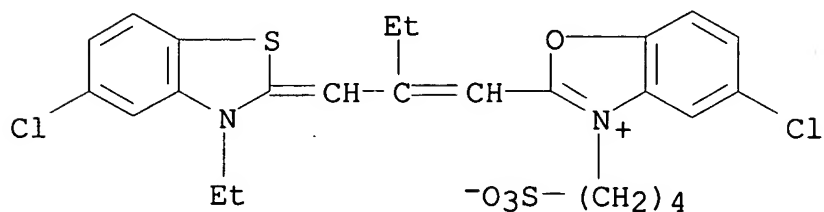
CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

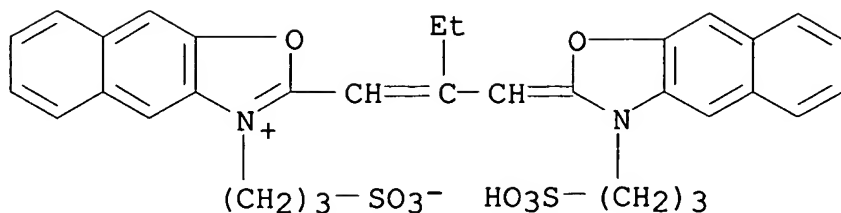
RN 85238-31-9 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



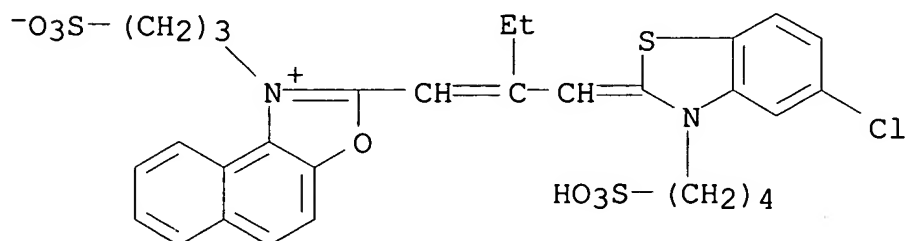
RN 114561-83-0 HCAPLUS

CN Naphth[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)naphth[2,3-d]oxazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 139453-99-9 HCAPLUS  
 CN Naphth[1,2-d]oxazolium, 2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-30  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
 IT **16704-72-6 23568-98-1 33628-03-4**  
**33628-08-9 34141-97-4 85238-31-9**  
**114561-83-0 139453-99-9**  
 (photog. sensitizer)

L29 ANSWER 34 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1991:217894 HCAPLUS  
 DOCUMENT NUMBER: 114:217894  
 TITLE: Study on supersensitizing combination of some **green sensitive** dyes  
 AUTHOR(S): Hu, Qianqi; Xing, Xuechao; Xu, Xiuzhen; Zhu, Zhenhua  
 CORPORATE SOURCE: Res. Inst. Fine Chem., East China Inst. Chem.

USHA SHRESTHA REM 4B28

SOURCE: Technol., Shanghai, Peop. Rep. China  
Huadong Huagong Xueyuan Xuebao (1990), 16(4),  
427-33

CODEN: HHKPDM; ISSN: 0253-9683

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

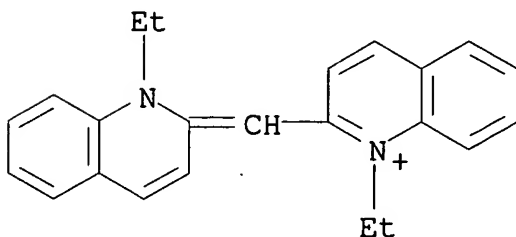
AB Spectral sensitization was studied using oxacarbocyanine, benzimidazolocarbo-cyanine, benzimidazolooxacarbocyanine, thia-2'-cyanine, 2,2'-cyanine, and meso-position Me-substituted selenocarbocyanine dyes and their mixts. ESR and polarog. measurement of dyes and photog. emulsion tests showed that the efficiency of the supersensitizing mixts. is related to the ESR signal and the polarog. half-wave potential. When the highest occupied energy level of the sensitizer was just above the top of the valence band of Ag(Br,I), no ESR signal was detected. The signal usually occurred when the oxidation electron potential of the supersensitizer was <0.88 V, i.e., lower than the oxidation electron potential of the sensitizer. The function of supersensitization can be explained by its hole-trapping mechanism.

IT 977-96-8 3520-43-2 6099-48-5  
14331-21-6 16055-33-7 24687-31-8  
52686-13-2 62417-69-0 102407-88-5  
123820-83-7 133670-14-1 133692-43-0

(photog. sensitizer mixture containing, supersensitizing properties of)

RN 977-96-8 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(1-ethyl-2(1H)-quinolinylidene)methyl]-, iodide (9CI) (CA INDEX NAME)

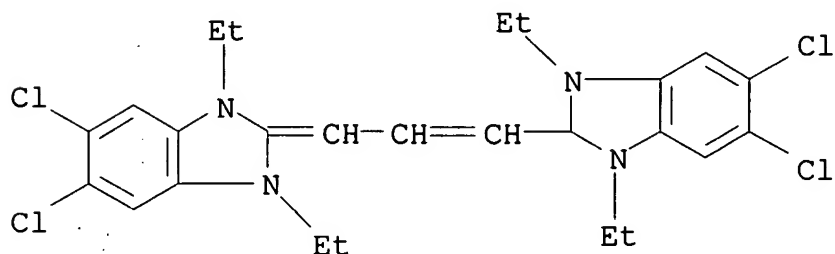


● I<sup>-</sup>

RN 3520-43-2 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1,3-diethyl-

1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1,3-diethyl-,  
iodide (9CI) (CA INDEX NAME)

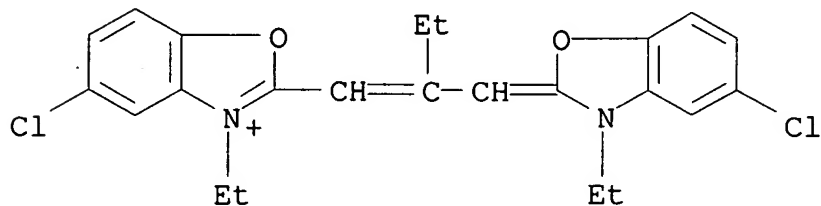


● I<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 6099-48-5 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-  
benzoxazolylidene)methyl]-1-butenyl]-3-ethyl-, iodide (9CI) (CA  
INDEX NAME)

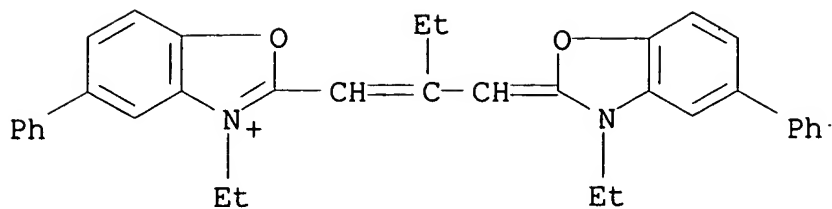


● I<sup>-</sup>

RN 14331-21-6 HCAPLUS

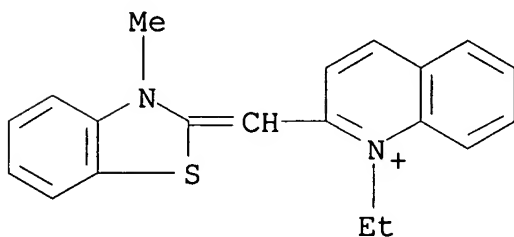
CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-phenyl-2(3H)-  
benzoxazolylidene)methyl]-1-butenyl]-5-phenyl-, iodide (9CI) (CA  
INDEX NAME)





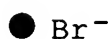
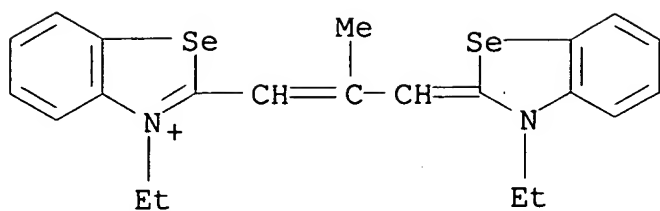
RN 16055-33-7 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



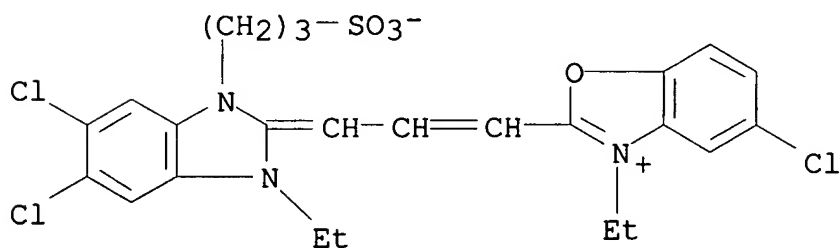
RN 24687-31-8 HCAPLUS

CN Benzoselenazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-2-methyl-1-propenyl]-, bromide (9CI) (CA INDEX NAME)



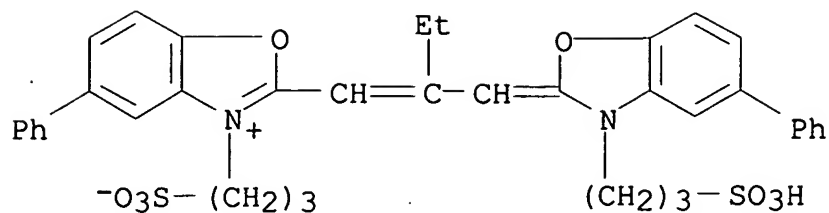
RN 52686-13-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 62417-69-0 HCAPLUS

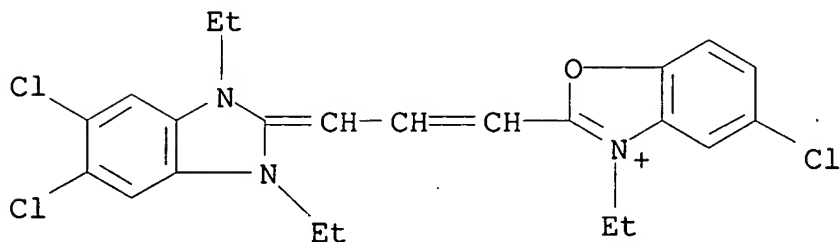
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

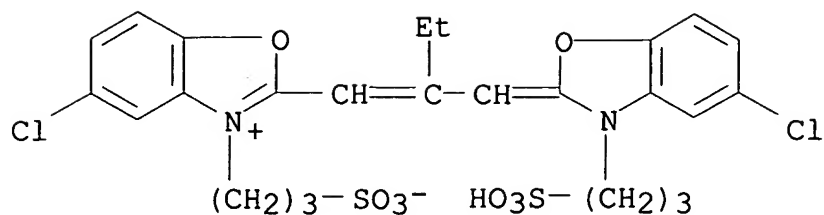
RN 102407-88-5 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 123820-83-7 HCAPLUS

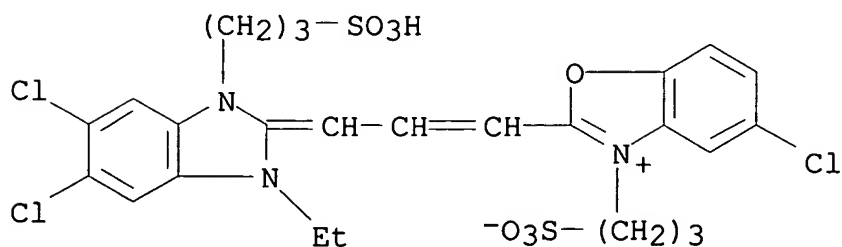
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 133670-14-1 HCAPLUS

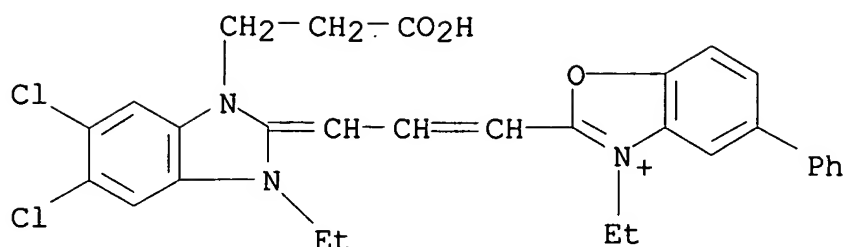
CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 133692-43-0 HCAPLUS

CN Benzoxazolium, 2-[3-[1-(2-carboxyethyl)-5,6-dichloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-phenyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT Photographic sensitizers  
(super-, mixture of **green-sensitive** dyes as)  
IT **977-96-8 3520-43-2 6099-48-5**  
**14331-21-6 16055-33-7 24687-31-8**  
**52686-13-2 62417-69-0 102407-88-5**  
**123820-83-7 133670-14-1 133692-43-0**  
(photog. sensitizer mixture containing, supersensitizing properties  
of)

L29 ANSWER 35 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1991:196263 HCAPLUS  
DOCUMENT NUMBER: 114:196263  
TITLE: Color print preparation using rapidly  
processable high-chloride silver halide  
photographic materials  
INVENTOR(S): Shiba, Keisuke; Sasaki, Noboru  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 02183249	A2	19900717 ✓	JP 1989-2458	

USHA SHRESTHA REM 4B28

1989  
0109

PRIORITY APPLN. INFO.:

JP 1989-2458

1989  
0109

AB In color printing on a Ag halide color photog. material containing a yellow-coloring layer, a cyan-coloring layer (CL), and a magenta-coloring layer (ML) using a color original obtained with a color film containing a blue-sensitive Ag halide emulsion layer, a red-sensitive Ag halide emulsion layer (RL), and a **green -sensitive** Ag halide emulsion layer, the spectral sensitivity distribution ( $S\lambda$ ) maximum of the RL layer is in the 95-645-nm region, and in  $\leq 50\%$  of the  $S\lambda$  maximum at 650 nm, and the ML and CL layers employ Ag halide of average AgCl content  $\geq 90$  mol%.

IT **23216-67-3 98835-00-8 133531-98-3**  
**133531-99-4**

(special sensitizer dye, color photog. material using)

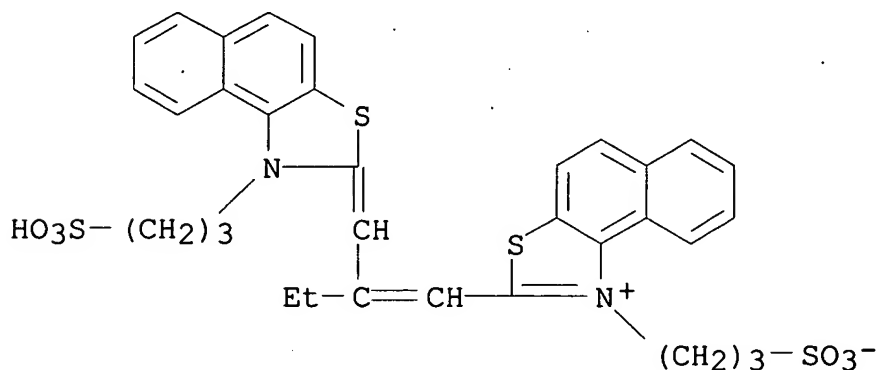
RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 4622-66-6

CMF C33 H32 N2 O6 S4



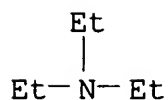
USHA SHRESTHA

REM 4B28

CM 2

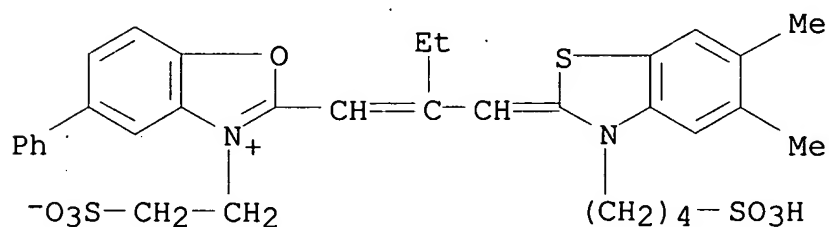
CRN 121-44-8

CMF C6 H15 N



RN 98835-00-8 HCAPLUS

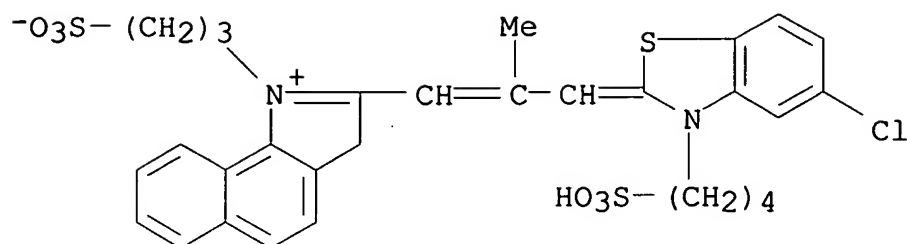
CN Benzoxazolium, 2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 133531-98-3 HCAPLUS

CN 3H-Benz[g]indolium, 2-[3-[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

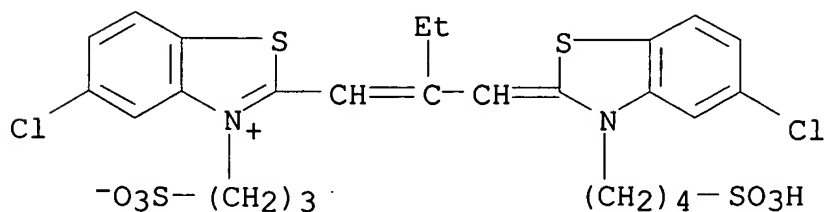
RN 133531-99-4 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 105482-13-1

CMF C26 H28 Cl2 N2 O6 S4

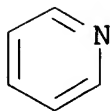


CM 2

CRN 110-86-1

CMF C5 H5 N





IC ICM G03C007-26  
 ICS G03C001-035; G03C007-30; G03C007-38  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT **23216-67-3 98835-00-8 133531-98-3**  
**133531-99-4**  
 (special sensitizer dye, color photog. material using)

L29 ANSWER 36 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1990:414603 HCAPLUS  
 DOCUMENT NUMBER: 113:14603  
 TITLE: ESR study of some **green sensitizing** dyes adsorbed to the  
 surfaces of silver iodobromide grains at low  
 and room temperatures  
 AUTHOR(S): Zhu, Zhenghua; Hu, Qianqi; Jiao, Ruo; Chen,  
 Tao  
 CORPORATE SOURCE: East China Univ. Chem. Technol., Shanghai,  
 200237, Peop. Rep. China  
 SOURCE: Journal of Imaging Science (1990), 34(2), 55-7  
 CODEN: JISCEJ; ISSN: 8750-9237  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The ESR spectra of some **green sensitizing** dyes  
 and supersensitizing dye combinations adsorbed on the surface of  
 Ag(Br,I) emulsion grains were investigated at both room temperature  
 (297 K) and low (130 or 110 K) temperature Some **green**  
**sensitizing** dyes thought to trap photo holes gave no ESR  
 signal at 297 K, but did give ESR signals at 110 or 130 K. The  
 ESR signals originate from the presence of dye pos. holes. At low  
 temps., e.g., 110 or 130 K, the measurement was more sensitive.  
 The dye pos. holes have different temperature-dependent stabilities.  
 At a given temperature only those dye pos. holes with lifetime longer  
 than the response time of the ESR spectrometer will be detected.  
 Therefore, the ESR measurements at low temps. are useful in

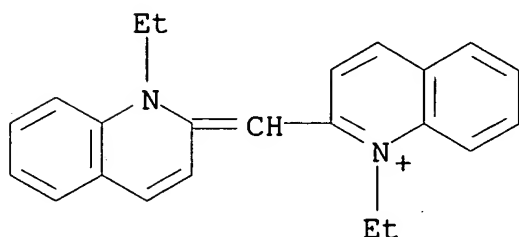
studying the mechanisms of spectral sensitization and supersensitization.

IT **977-96-8 16055-33-7 24687-31-8**

(ESR of, adsorbed on silver iodobromide grain surface, photog. emulsion sensitization mechanism in relation to)

RN 977-96-8 HCAPLUS

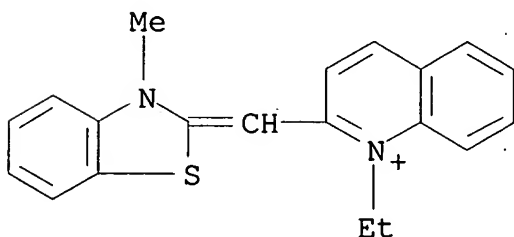
CN Quinolinium, 1-ethyl-2-[(1-ethyl-2(1H)-quinolinylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 16055-33-7 HCAPLUS

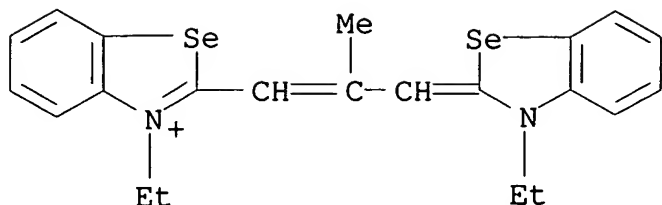
CN Quinolinium, 1-ethyl-2-[(3-methyl-2(3H)-benzothiazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 24687-31-8 HCAPLUS

CN Benzoselenazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-2-methyl-1-propenyl]-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

- CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 73
- IT Electron spin resonance  
(of **green sensitizing** dyes adsorbed on surface of silver iodobromide grains, photog. emulsion sensitization mechanism in relation to)
- IT Photographic emulsions  
(spectral and supersensitization of, mechanism of, ESR of **green sensitizing** dyes adsorbed on surface of silver iodobromide grains in study of)
- IT 107251-18-3, Silver bromide iodide (Ag(Br,I))  
(ESR of **green sensitizing** dyes adsorbed on surface of grains of)
- IT **977-96-8 16055-33-7 24687-31-8**  
(ESR of, adsorbed on silver iodobromide grain surface, photog. emulsion sensitization mechanism in relation to)

L29 ANSWER 37 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1990:242927 HCAPLUS  
DOCUMENT NUMBER: 112:242927  
TITLE: Silver halide color photographic material with improved color reproducibility  
INVENTOR(S): Ezaki, Atsuo; Haga, Yoshihiro; Haraga, Hideaki  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 01202746	A2	19890815/	JP 1988-29637	1988 0209

PRIORITY APPLN. INFO.:

JP 1988-29637

1988  
0209

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*

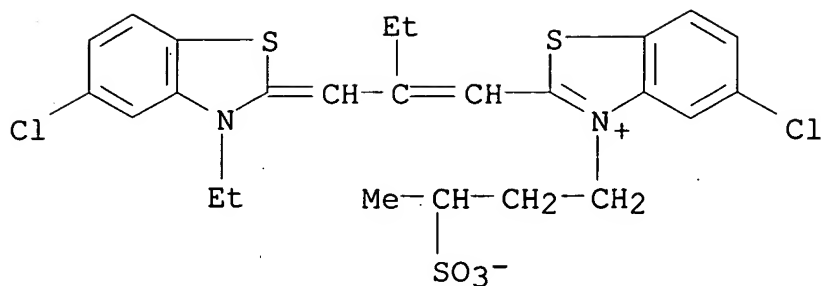
AB The title photog. material comprises a red-sensitive Ag halide emulsion layer containing red-sensitizing dyes I and II, a **green-sensitive** Ag halide emulsion layer containing **green-sensitizing** dyes III and (IV), and a blue-sensitive Ag halide emulsion layer containing blue-sensitizing dyes V and (or) VI [Z1, Z2 = atoms required to complete a 5-membered heterocyclic ring condensed onto a benzene or naphthalene ring; R1, R2 = C $\leq$ 10 alkyl, pyridyl, carbamoyl; R3 = H, C $\leq$ 6 alkyl, alkoxy, Ph; R4, R5 = C $\leq$ 6 alkyl; R6 = alkyl, alkoxy, Ph, pyridyl; Y1 = O, S; Y2, Y3 = O, S, Se; X- = anion; n = 0, 1] and contains in  $\geq$ 1 Ag halide emulsion layer a compound or its precursor which releases a photog. useful reagent upon attack by a nucleophilic agent subsequent to oxidation by the oxidized products of a color developing agent.

IT **18426-55-6 39201-42-8 41664-70-4**  
**51859-32-6 94143-42-7 95181-26-3**  
**113276-75-8 127430-70-0 127430-71-1**  
**127430-72-2 127430-73-3 127430-74-4**  
**127430-75-5 127430-77-7 127430-78-8**  
**127430-79-9 127474-44-6**

(photog. sensitizer)

RN 18426-55-6 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolyliidene)methyl]-1-butenyl]-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



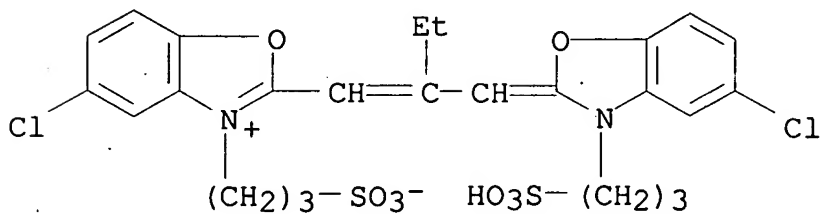
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME).

CM 1

CRN 6200-35-7

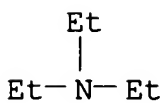
CMF C25 H26 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

CMF C6 H15 N



USHA SHRESTHA

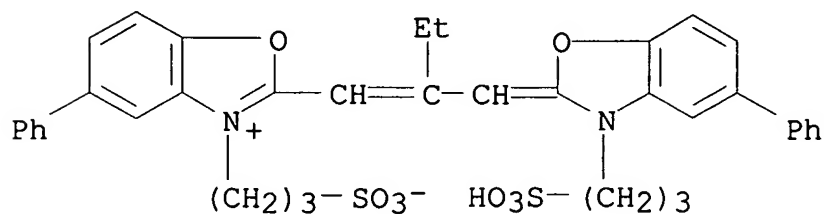
REM 4B28

RN 41664-70-4 HCAPLUS  
 CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29133-39-9

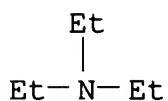
CMF C37 H36 N2 O8 S2



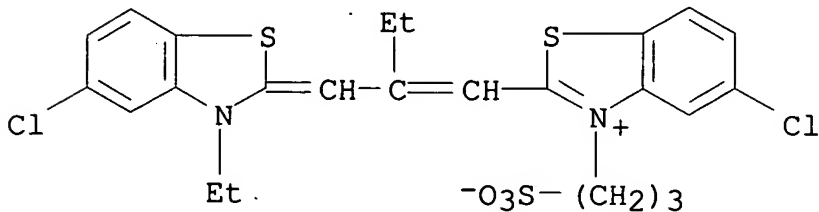
CM 2

CRN 121-44-8

CMF C6 H15 N

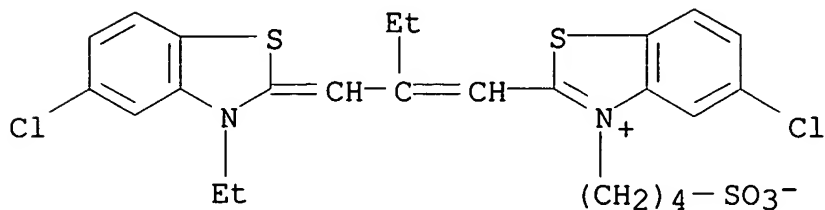


RN 51859-32-6 HCAPLUS  
 CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolyliidene)methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



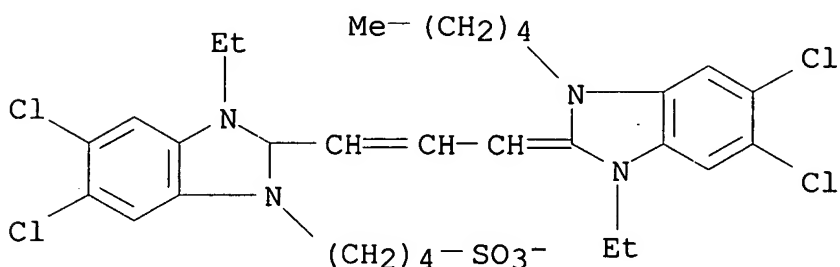
RN 94143-42-7 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylydene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 95181-26-3 HCAPLUS

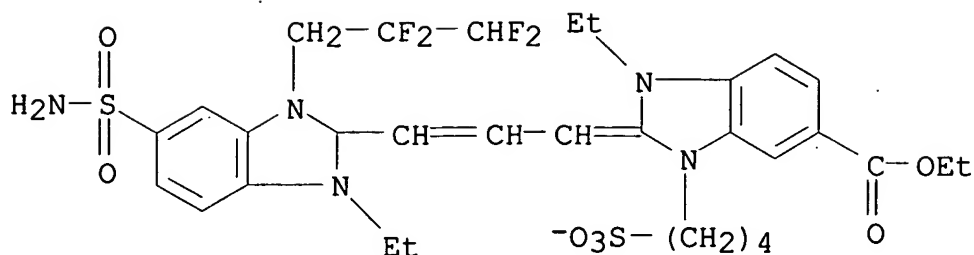
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1-ethyl-1,3-dihydro-3-pentyl-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 113276-75-8 HCAPLUS

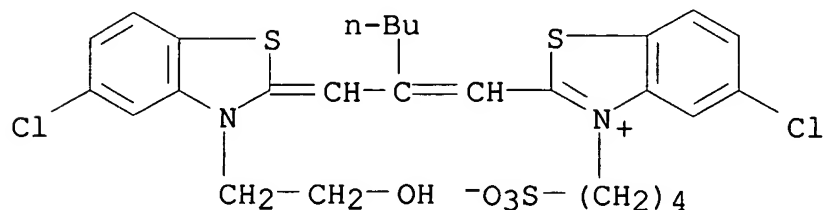
CN 1H-Benzimidazolium, 5-(aminosulfonyl)-2-[3-[5-(ethoxycarbonyl)-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(2,2,3,3-tetrafluoropropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

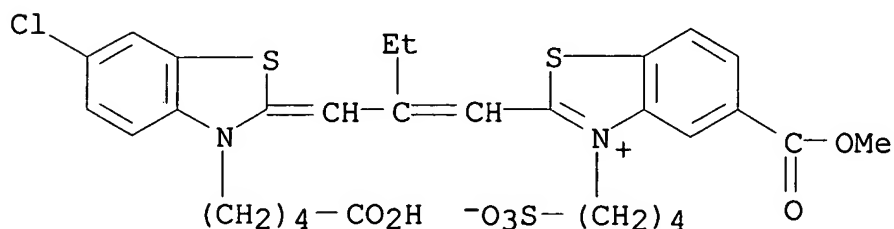
RN 127430-70-0 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(2-hydroxyethyl)-2(3H)-benzothiazolylidene]methyl]-1-hexenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 127430-71-1 HCAPLUS

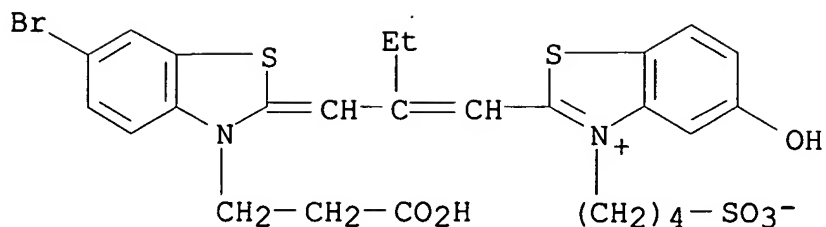
CN Benzothiazolium, 2-[2-[[3-(4-carboxybutyl)-6-chloro-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-(methoxycarbonyl)-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 127430-72-2 HCAPLUS

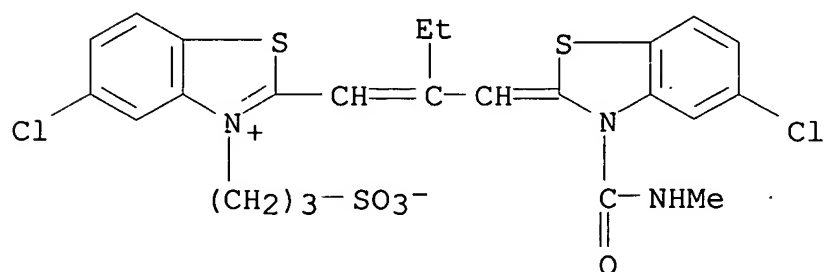
CN Benzothiazolium, 2-[2-[[6-bromo-3-(2-carboxyethyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-hydroxy-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)





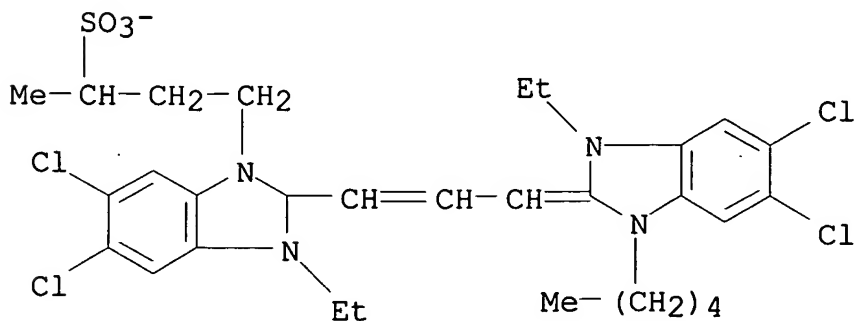
RN 127430-73-3 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-[(methylamino)carbonyl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 127430-74-4 HCAPLUS

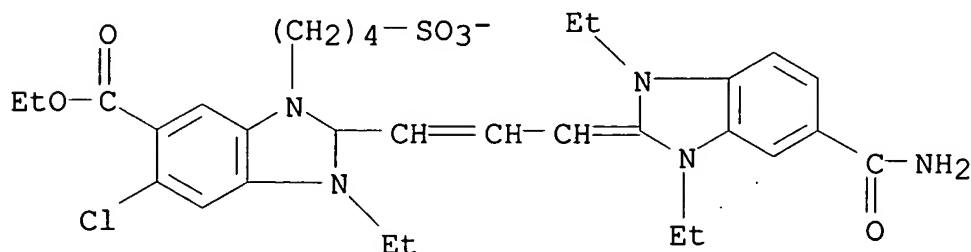
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-pentyl-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 127430-75-5 HCAPLUS

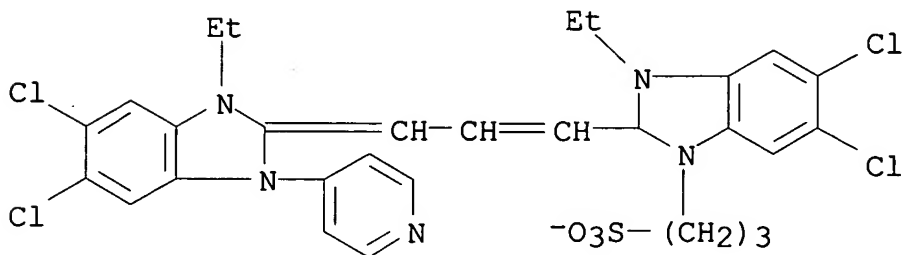
CN 1H-Benzimidazolium, 2-[3-[5-(aminocarbonyl)-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-5-chloro-6-(ethoxycarbonyl)-3-ethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 127430-77-7 HCAPLUS

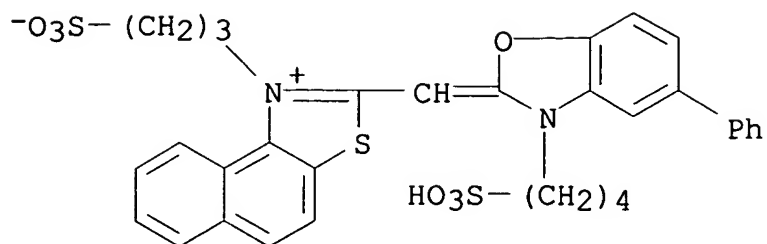
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-pyridinyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 127430-78-8 HCAPLUS

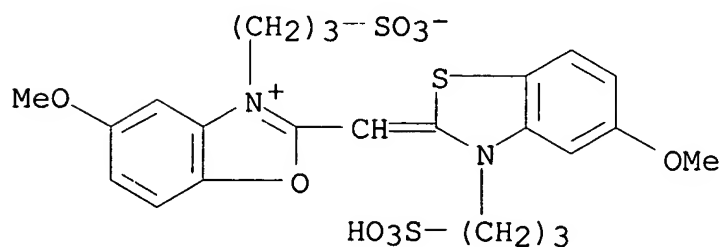
CN Naphtho[1,2-d]thiazolium, 2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 127430-79-9 HCAPLUS

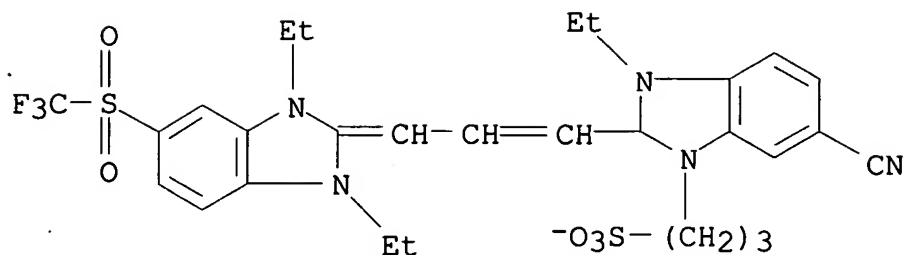
CN Benzoxazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 127474-44-6 HCAPLUS

CN 1H-Benzimidazolium, 5-cyano-2-[3-[1,3-diethyl-1,3-dihydro-5-[(trifluoromethyl)sulfonyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC ICM G03C001-18

ICS G03C001-16; G03C001-22; G03C007-26

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **18426-55-6** 25962-16-7 28279-27-8 **39201-42-8**

**41664-70-4 51859-32-6 94143-42-7**

94143-54-1 94143-55-2 **95181-26-3 113276-75-8**

**127430-70-0 127430-71-1 127430-72-2**

**127430-73-3 127430-74-4 127430-75-5**

**127430-77-7 127430-78-8 127430-79-9**

127450-17-3 127450-18-4 **127474-44-6**

(photog. sensitizer)

L29 ANSWER 38 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:213814 HCAPLUS

DOCUMENT NUMBER: 108:213814

TITLE: Silver halide color print paper with good color reproducibility

INVENTOR(S): Oya, Yukio; Hirabayashi, Shigeto

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

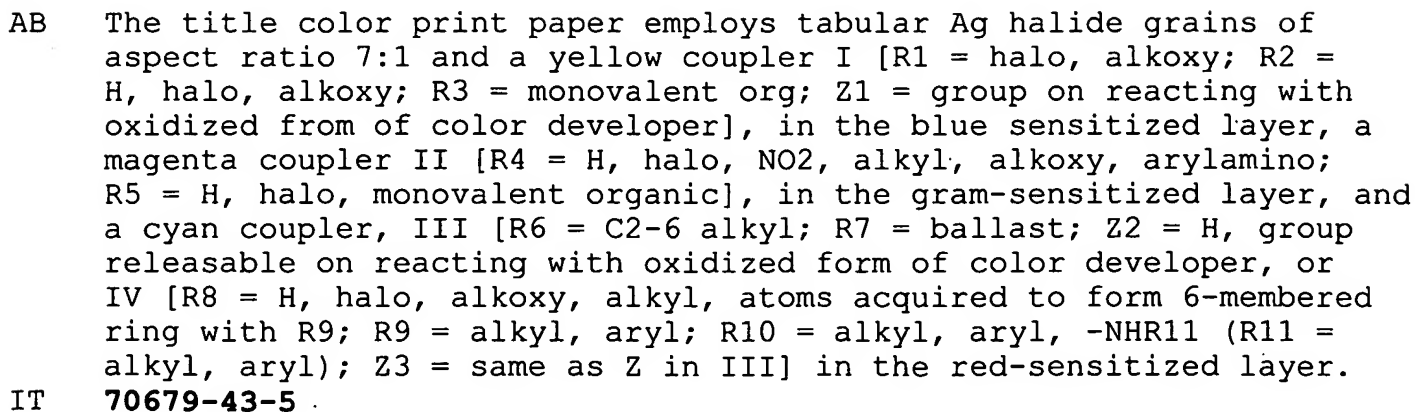
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 62237451	A2	19871017 /	JP 1986-80383	1986 0408

USHA SHRESTHA

REM 4B28

1986  
0408

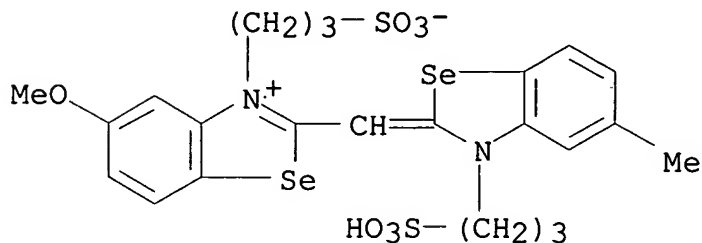
GI



(blue-sensitizing dye, paper for color prints containing)

RN 70679-43-5 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



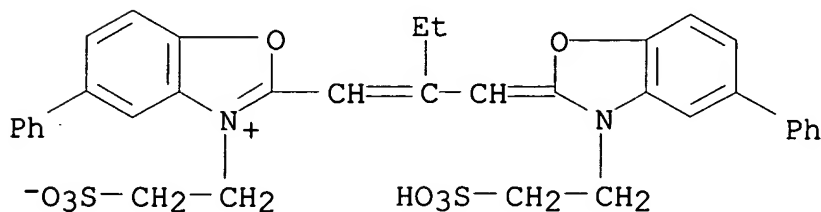
● Na

IT 53338-58-2

(green-sensitizing dye, paper for color prints containing)

RN 53338-58-2 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

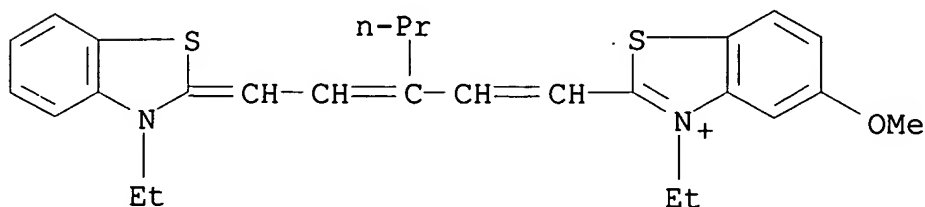
IT 114561-70-5

(red-sensitizing dye, paper for color prints containing)

USHA SHRESTHA

REM 4B28

RN 114561-70-5 HCAPLUS  
CN Benzothiazolium, 3-ethyl-2-[3-[(3-ethyl-2(3H)-  
benzothiazolylidene)ethylidene]-1-hexenyl]-5-methoxy- (9CI) (CA  
INDEX NAME)



IC ICM G03C007-34  
ICS G03C001-02; G03C007-20; G03C007-36; G03C007-38  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT **70679-43-5**  
(blue-sensitizing dye, paper for color prints containing)  
IT **53338-58-2**  
(**green-sensitizing** dye, paper for color  
prints containing)  
IT **114561-70-5**  
(red-sensitizing dye, paper for color prints containing)

L29 ANSWER 39 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1988:177060 HCAPLUS  
DOCUMENT NUMBER: 108:177060  
TITLE: Silver halide color photographic materials  
with improved sensitivity and color  
reproducibility  
INVENTOR(S): Yoshizawa, Tomomi; Kagawa, Nobuaki; Otani,  
Hiroshi; Aoki, Junko  
PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28

JP 62222244

A2

19870930/

JP 1986-65379

1986

0324

PRIORITY APPLN. INFO.:

JP 1986-65379

1986

0324

GI For diagram(s), see printed CA Issue.

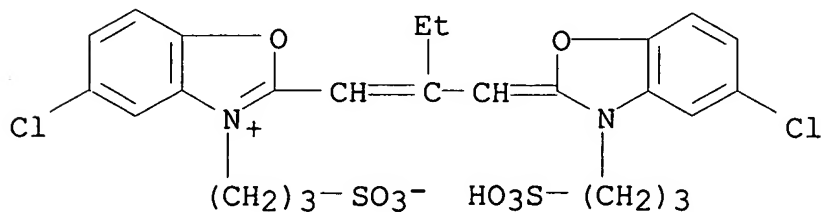
AB The title photog. materials contain **green-sensitive** emulsion layers spectrally-sensitized by using  $\geq 1$  dye of the formula I ( $R_1, R_2 = C1-6$  alkyl;  $Z1 =$  benzothiazole or benzoselenazole ring;  $X^- =$  anion;  $m = 0, 1$ ),  $\geq 1$  dye of the formula II ( $V1-V8 = H, \text{halo, alkyl, alkoxy, alkoxy carbonyl, aryl}$ ; adjacent pairs of  $V1-V8$  may form condensed rings;  $A = H, \text{alkyl}$ ;  $R_3, R_4 = \text{alkyl}$ ;  $\geq 1$  of  $R_3$  and  $R_4 =$  sulfoalkyl, carboxyalkyl;  $X^- =$  anion;  $n = 0, 1$ ) and  $\geq 1$  dye of the formula III ( $W1, W2, W4 = V1$ ;  $W3 = \text{halo, alkyl, alkoxy, aryl, alkoxy carbonyl}$ ;  $B = H, \text{alkyl}$ ;  $R_5, R_6 = \text{alkyl}$ ;  $\geq 1$  of  $R_5$  and  $R_6 =$  sulfoalkyl, carboxyalkyl;  $X^- =$  anion;  $p = 0, 1$ ).

IT 6200-35-7 34141-97-4 36772-47-1  
64722-51-6 67326-80-1 114108-68-8  
114108-69-9 114108-70-2 114136-35-5  
114136-37-7 114168-54-6

(photog. spectral supersensitizer compns. containing)

RN 6200-35-7 HCAPLUS

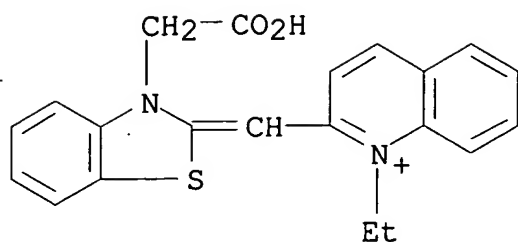
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



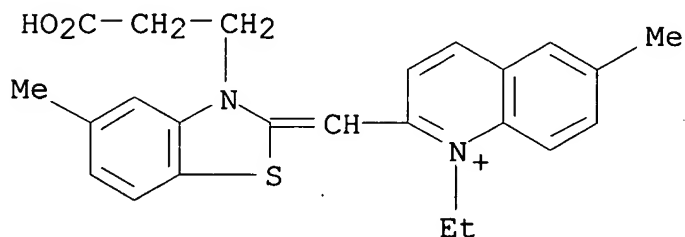
RN 34141-97-4 HCAPLUS

CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)

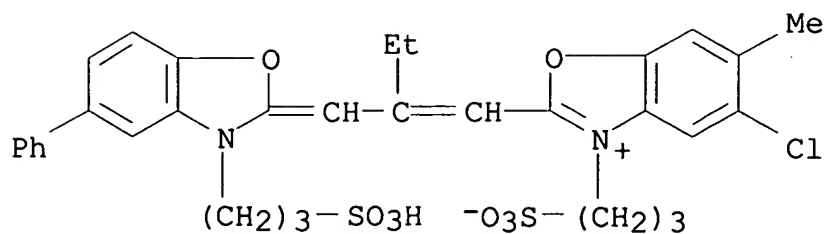


● I<sup>-</sup>

RN 36772-47-1 HCAPLUS  
 CN Quinolinium, 2-[[3-(2-carboxyethyl)-5-methyl-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

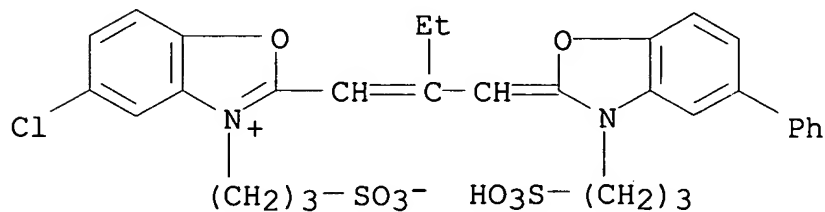
RN 64722-51-6 HCAPLUS  
 CN Benzoxazolium, 5-chloro-6-methyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 67326-80-1 HCAPLUS

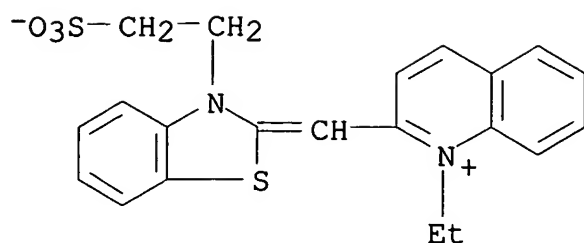
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



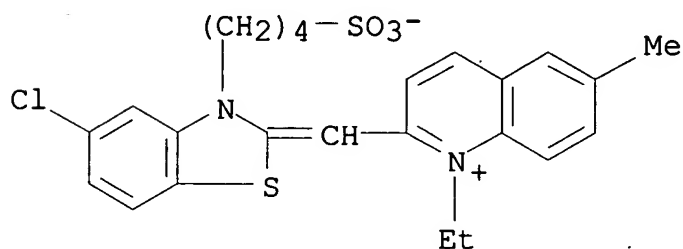
● Na

RN 114108-68-8 HCAPLUS

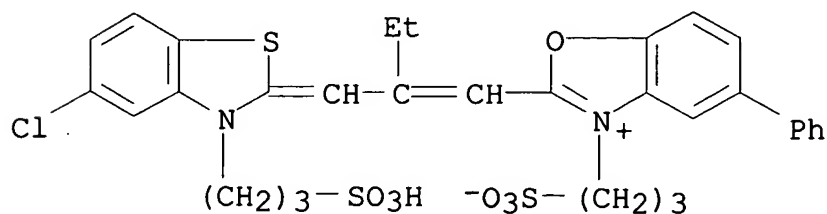
CN Quinolinium, 1-ethyl-2-[[3-(2-sulfoethyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



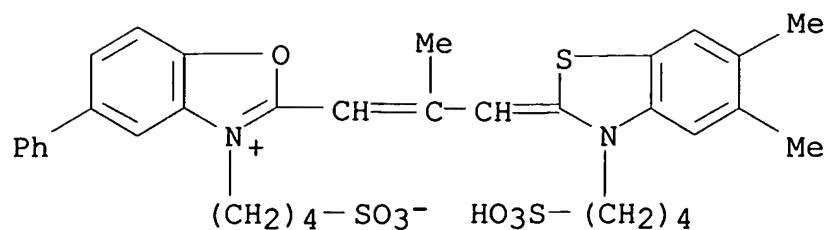
RN 114108-69-9 HCAPLUS  
 CN Quinolinium, 2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-  
 benzothiazolylidene]methyl]-1-ethyl-6-methyl-, inner salt (9CI)  
 (CA INDEX NAME).



RN 114108-70-2 HCAPLUS  
 CN Benzoxazolium, 2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-  
 benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-  
 , inner salt (9CI) (CA INDEX NAME)



RN 114136-35-5 HCAPLUS  
 CN Benzoxazolium, 2-[3-[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-  
 benzothiazolylidene]-2-methyl-1-propenyl]-5-phenyl-3-(4-  
 sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



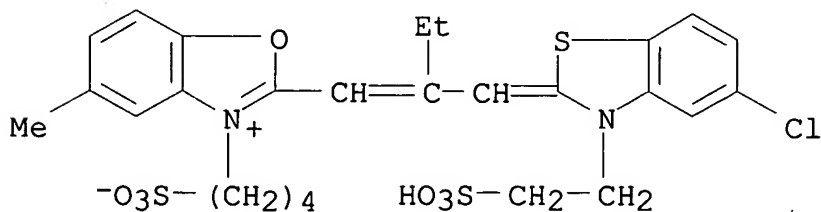
RN 114136-37-7 HCAPLUS

CN Benzoxazolium, 2-[2-[[5-chloro-3-(2-sulfoethyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-methyl-3-(4-sulfoethyl)-, inner salt, compd. with N-ethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 114136-36-6

CMF C26 H29 Cl N2 O7 S3



CM 2

CRN 109-89-7

CMF C4 H11 N

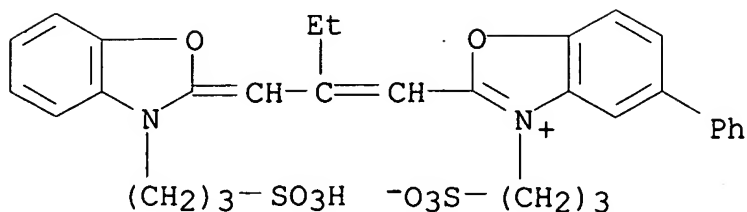


RN 114168-54-6 HCAPLUS

CN Benzoxazolium, 5-phenyl-3-(3-sulfopropyl)-2-[2-[[3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

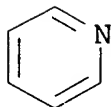
CM 1

CRN 94887-99-7  
CMF C31 H32 N2 O8 S2



CM 2

CRN 110-86-1  
CMF C5 H5 N



IC ICM G03C001-14  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
ST spectral supersensitizer cyanine dye photog; **green**  
**sensitizer** dye photog  
IT **6200-35-7 34141-97-4 36772-47-1**  
**64722-51-6 67326-80-1 114108-68-8**  
**114108-69-9 114108-70-2 114136-35-5**  
**114136-37-7 114168-54-6**  
(photog. spectral supersensitizer compns. containing)

L29 ANSWER 40 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1987:646615 HCAPLUS  
DOCUMENT NUMBER: 107:246615  
TITLE: Photosensitive material for photographic masks  
INVENTOR(S): Yoshida, Yoshinobu; Mihara, Yuji; Hara, Makoto  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

USHA SHRESTHA REM 4B28

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 62121444	A2	19870602 ✓	JP 1985-262224	1985 1121
PRIORITY APPLN. INFO.:			JP 1985-262224	1985 1121

AB A black-and-white photog. material for photog. masks consists of a transparent support and  $\geq 1$  blue-sensitive emulsion layer,  $\geq 1$  **green-sensitive** emulsion layer, and  $\geq 1$  blue-sensitive emulsion layer, the blue-sensitive emulsion layers containing a neg.-type photosensitive Ag halide emulsion layer and the **green-sensitive** and red-sensitive Ag halide emulsion layers containing autopol.-type photosensitive Ag halide emulsion layers. The above material may use  $\geq 1$  blue-sensitive emulsion layer and  $\geq 1$  yellow-sensitive emulsion layer, the blue-sensitive layers containing a neg.-type photosensitive Ag halide emulsion layer and the yellow-sensitive layers containing an autopol.-type photosensitive Ag halide emulsion layer. The material is useful in image conversion employing the blue-screen method and is useful in cinematog. industry.

IT **59472-88-7 72491-41-9 90438-91-8**  
**111628-42-3**

(photosensitive material containing, for photog. masks)

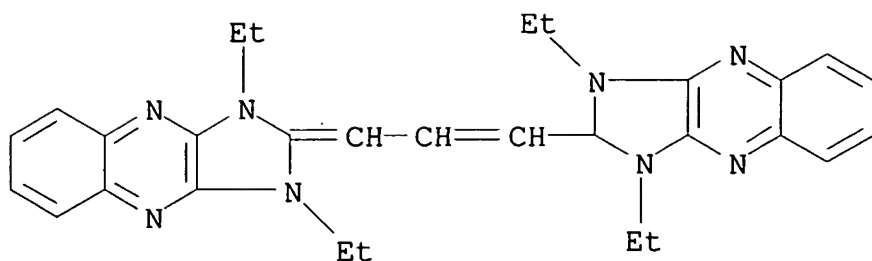
RN 59472-88-7 HCAPLUS

CN 1H-Imidazo[4,5-b]quinoxalinium, 2-[3-(1,3-diethyl-1,3-dihydro-2H-imidazo[4,5-b]quinoxalin-2-ylidene)-1-propenyl]-1,3-diethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 51943-68-1

CMF C29 H31 N8

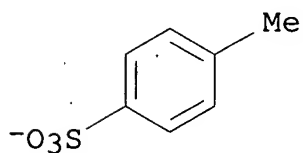


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

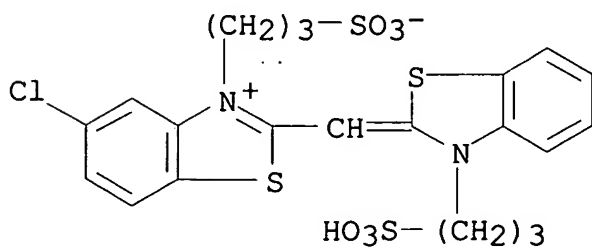
CRN 16722-51-3

CMF C7 H7 O3 S



RN 72491-41-9 HCAPLUS

CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt, sodium salt (9CI)  
(CA INDEX NAME)



● Na

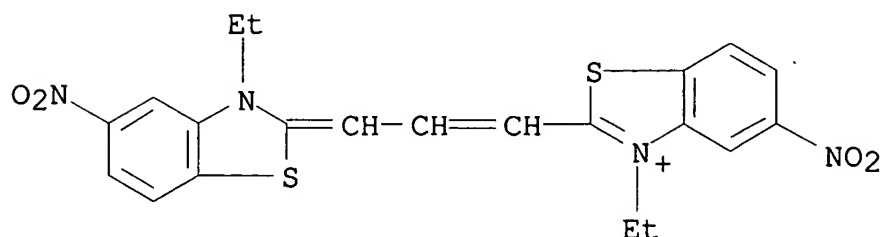
USHA SHRESTHA

REM 4B28

RN 90438-91-8 HCAPLUS  
 CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-5-nitro-2(3H)-  
 benzothiazolylydene)-1-propenyl]-5-nitro-, salt with  
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

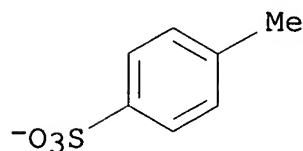
CM 1

CRN 58089-19-3  
 CMF C21 H19 N4 O4 S2



CM 2

CRN 16722-51-3  
 CMF C7 H7 O3 S

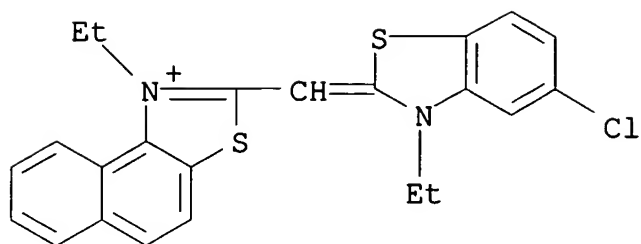


RN 111628-42-3 HCAPLUS  
 CN Naphtho[1,2-d]thiazolium, 2-[(5-chloro-3-ethyl-2(3H)-  
 benzothiazolylydene)methyl]-1-ethyl-, salt with  
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

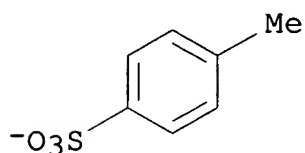
CRN 111628-41-2  
 CMF C23 H20 Cl N2 S2





CM 2

CRN 16722-51-3  
CMF C7 H7 O3 S



IC ICM G03C001-46  
ICS G03C001-485; G03C005-00  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT **59472-88-7 72491-41-9 90438-91-8**  
**111628-42-3**  
(photosensitive material containing, for photog. masks)

L29 ANSWER 41 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:487068 HCAPLUS

DOCUMENT NUMBER: 107:87068

TITLE: Method for processing light-sensitive silver halide color photographic material

INVENTOR(S): Kurematsu, Masayuki; Koboshi, Shigeharu

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd. , Japan

SOURCE: Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

USHA SHRESTHA REM 4B28

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 217643	A2	19870408	EP 1986-307394	1986 0925
EP 217643	A3	19880127		
EP 217643	B1	19910123		
R: DE, FR, GB				
JP 62075451	A2	19870407	JP 1985-216010	1985 0927
AU 8663097	A1	19870402	AU 1986-63097	1986 0924
AU 596118	B2	19900426		
CA 1294814	A1	19920128	CA 1986-519227	1986 0926
PRIORITY APPLN. INFO.:			JP 1985-216010	A 1985 0927

GI For diagram(s), see printed CA Issue.

AB A method is described for processing a color photog. material having a light-sensitive Ag halide emulsion layer containing a sensitizing dye of the formula I [Z1, Z2 = group necessary for formation of an azole, pyridine, or quinoline nucleus; R1, R2 = alkyl, alkenyl, aryl; R3 = H, Me, Et; X = anion; l = 1 or 0]. The dry thickness of the above layer and a nonlight-sensitive Ag halide layer is  $\geq 10 \mu\text{m}$ . The material is exposed, developed in a solution containing no benzyl alc., fixed, and stabilized in a solution having surface tension 8-50 dynes/cm and containing no aldehyde compound and containing  $\geq 1$  of  $\text{AO(B)mX1}$  and  $\text{R4R5R6R7N+X2-}$  [A = C6-20 alkyl or arylalkyl; B = ethylene oxide or propylene oxide; m = 4-50; X1 = H,  $\text{SO3Y}$ , or  $\text{PO3Y2}$ ; Y = H, alkali metal,  $\text{NH4}$ ; R4-R7 = H, alkyl, Ph; total C atoms of R4-R7 is 3-50; X2 = anion]. The process is followed by drying. A photog. paper was prepared by incorporating II as the sensitizing dye in the **green-sensitive** layer, III in the red-sensitive layer, and IV in the blue-sensitive layer. The material was exposed and processed in a developer containing no benzyl alc. and a stabilizing solution having a surface tension of 36 dynes/cm and containing

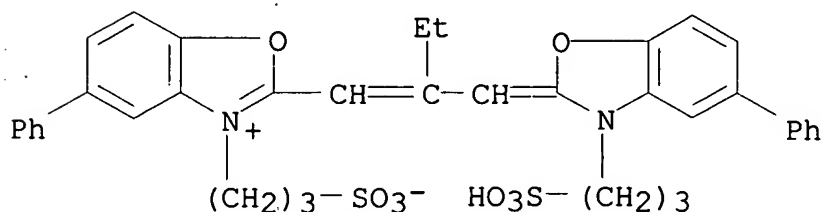
C<sub>8</sub>H<sub>17</sub>-p-C<sub>6</sub>H<sub>4</sub>O(C<sub>2</sub>H<sub>4</sub>O)<sub>10</sub>H. The white background appeared more white than in the H<sub>2</sub>O-washing method and the spectral reflective d. and fading of the yellow dye were 0.098 and 22%, resp., compared to 0.132 and 34%, resp., for a process in which benzyl alc. was included in the developer and the surface tension of the stabilizer solution was 70 dynes/cm.

IT **29133-39-9 51588-85-3 55425-22-4**  
**109870-39-5**

(photog. spectral sensitizer)

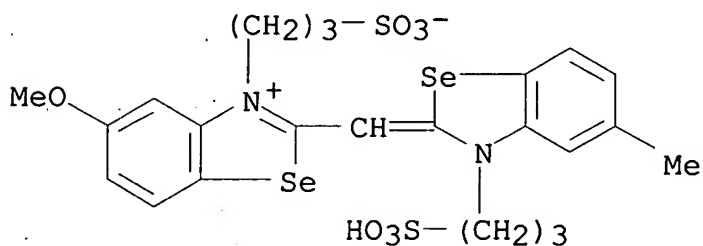
RN 29133-39-9 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



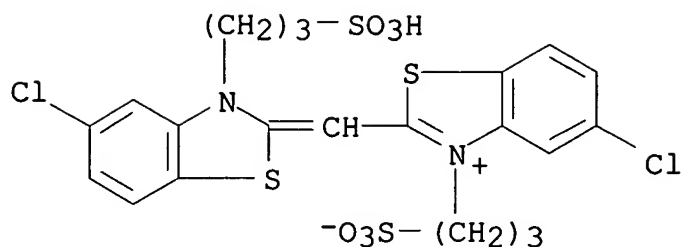
RN 51588-85-3 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



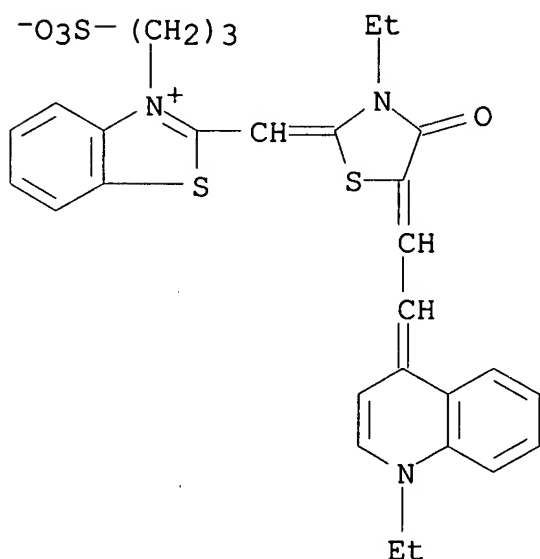
RN 55425-22-4 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 109870-39-5 HCAPLUS

CN Benzothiazolium, 2-[[3-ethyl-5-[(1-ethyl-4(1H)-quinolinylidene)ethylidene]-4-oxo-2-thiazolidinylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-40

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **29133-39-9 51588-85-3 55425-22-4**  
**109870-39-5**

(photog. spectral sensitizer)

L29 ANSWER 42 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:616727 HCAPLUS

DOCUMENT NUMBER: 105:216727

TITLE: Color diffusion-transfer photothermographic

USHA SHRESTHA REM 4B28

photosensitive material for cathode ray tube  
image recording

INVENTOR(S): Masukawa, Toyoaki; Morita, Hideki  
PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61067850	A2	19860408	JP 1984-191357	1984 0911
JP 06079146	B4	19941005	JP 1984-191357	1984 0911

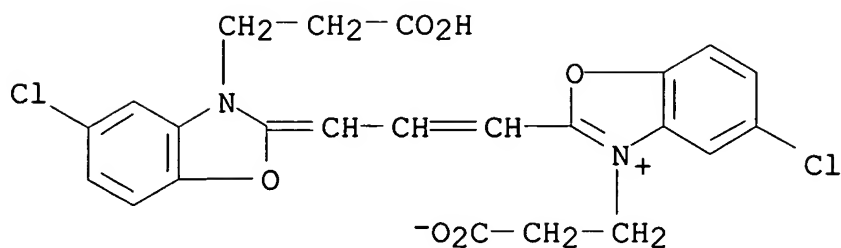
PRIORITY APPLN. INFO.: JP 1984-191357

AB The claimed color diffusion-transfer photothermog. material has  
a (1) a blue-sensitive layer containing Ag halides, an organic Ag salt,  
diffusible yellow dye releaser, and a binder, (2) a **green**  
**-sensitive** layer containing Ag halides, an organic Ag salt, a  
diffusible magenta dye releaser, and a binder, and (3) a  
red-sensitive layer containing Ag halides (spectrally sensitized to  
have sensitivity maximum at 600-650 nm), an organic Ag salt, a  
diffusible cyan dye releaser, and a binder.

IT **105351-39-1**  
(color diffusion-transfer photothermog. materials containing)

RN 105351-39-1 HCAPLUS

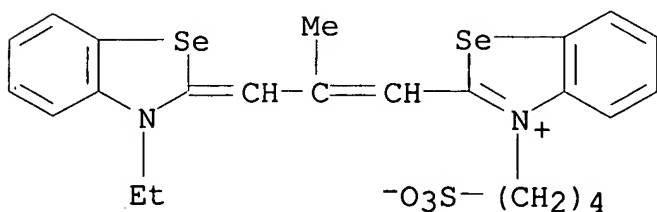
CN Benzoxazolium, 3-(2-carboxyethyl)-2-[3-[3-(2-carboxyethyl)-5-  
chloro-2(3H)-benzoxazolylidene]-1-propenyl]-5-chloro-, inner salt  
(9CI) (CA INDEX NAME)



IT 30516-02-0 105351-35-7 105351-37-9  
 105351-38-0 105389-38-6 105389-40-0  
 (spectral sensitizer dye, for color diffusion-transfer  
 photothermog. materials for photographing cathode-ray tube  
 images)

RN 30516-02-0 HCAPLUS

CN Benzoselenazolium, 2-[3-(3-ethyl-2(3H)-benzoselenazolylydene)-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



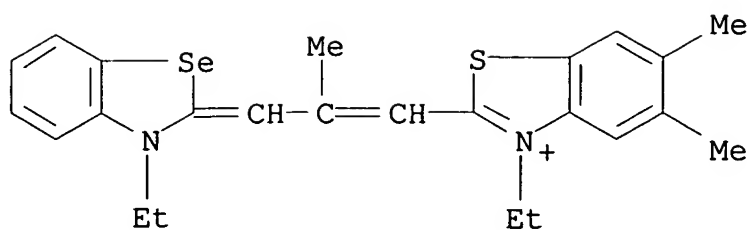
RN 105351-35-7 HCAPLUS

CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylydene)-2-methyl-1-propenyl]-5,6-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 105351-34-6

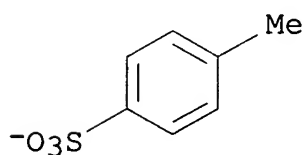
CMF C24 H27 N2 S Se



CM 2

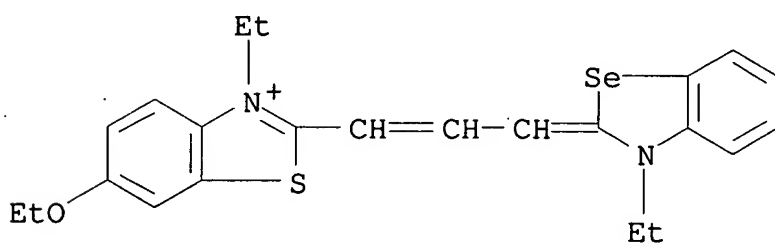
CRN 16722-51-3

CMF C7 H7 O3 S



RN 105351-37-9 HCAPLUS

CN Benzothiazolium, 6-ethoxy-3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

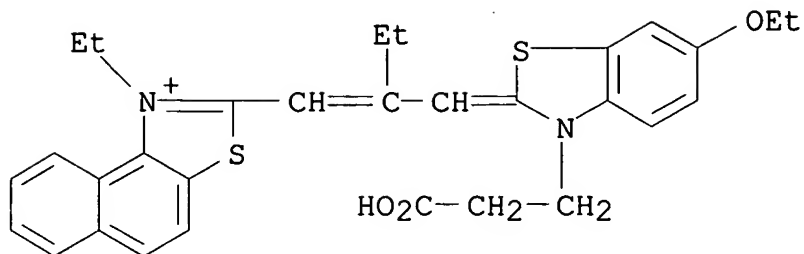
RN 105351-38-0 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[2-[[3-(2-carboxyethyl)-6-ethoxy-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-1-ethyl-, bromide (9CI)

USHA SHRESTHA

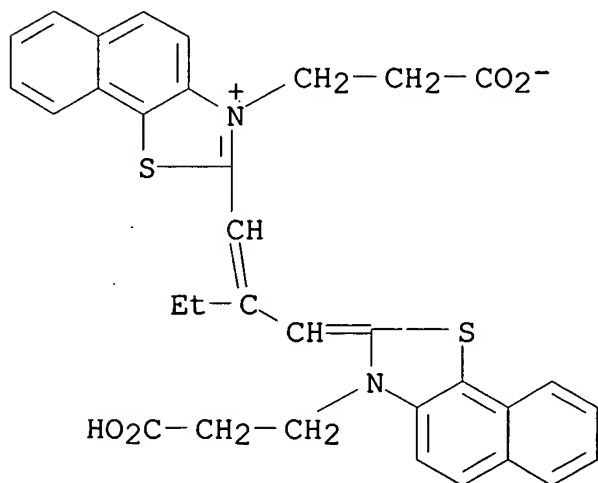
REM 4B28

(CA INDEX NAME)

● Br<sup>-</sup>

RN 105389-38-6 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 3-(2-carboxyethyl)-2-[2-[[3-(2-carboxyethyl)naphtho[2,1-d]thiazol-2(3H)-ylidene]methyl]-1-butenyl]-, inner salt (9CI) (CA INDEX NAME)



RN 105389-40-0 HCAPLUS

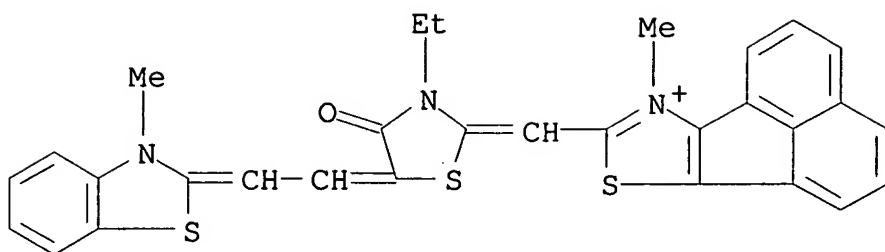
CN Acenaphtho[1,2-d]thiazolium, 8-[[3-ethyl-5-[(3-methyl-2(3H)-benzothiazolylidene)ethylidene]-4-oxo-2-thiazolidinylidene]methyl]-9-methyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)



CM 1

CRN 105389-39-7

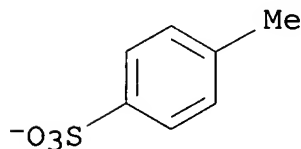
CMF C30 H24 N3 O S3



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



IC ICM G03C007-00

ICS H04N009-79

ICA H04N001-23

CC 74-7 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 7564-64-9 7783-96-2D, solid solution with silver bromide

7785-23-1D, solid solution with silver iodide 76267-74-8

81772-49-8 81910-16-9 87457-72-5 100803-64-3 102727-74-2

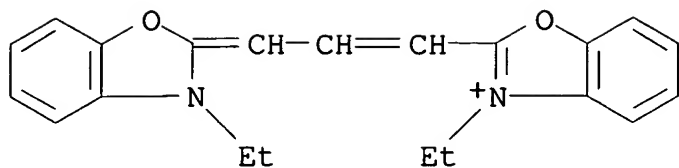
**105351-39-1** 105351-40-4 105351-41-5 105389-41-1

(color diffusion-transfer photothermog. materials containing)

IT **30516-02-0 105351-35-7 105351-37-9****105351-38-0 105389-38-6 105389-40-0**

(spectral sensitizer dye, for color diffusion-transfer photothermog. materials for photographing cathode-ray tube images)

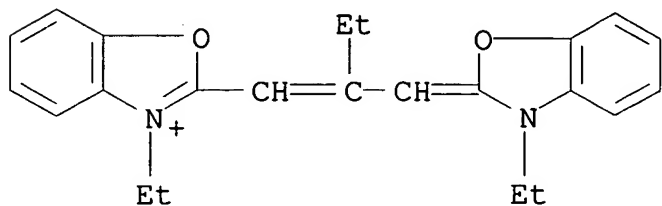
L29 ANSWER 43 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1986:216338 HCAPLUS  
DOCUMENT NUMBER: 104:216338  
TITLE: Electronic energy level and spectral  
sensitivity of **green**  
**sensitized** dyes  
AUTHOR(S): Luo, Shineng; Shi, Junying  
CORPORATE SOURCE: Dep. Fine Chem. Technol., East China Inst.  
Chem. Technol., Shanghai, Peop. Rep. China  
SOURCE: Ganguang Kexue Yu Guang Huaxue (1986), (1),  
8-16  
CODEN: GKKHE9; ISSN: 1000-3231  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB HMO theory was used to calculate the electronic energy level of a  
series of sym. and unsym. oxacarbocyanine,  
benzimidazolooxacarbocyanine, and quinoline-thiocyanine dyes, and  
their polarog. half-wave potentials and spectral sensitization of  
Ag halide emulsions were measured. There was a good agreement  
between the calculated and measured values.  
IT 905-96-4 1054-00-8 1054-05-3  
14331-21-6 16025-99-3 28993-84-2  
38869-78-2 52078-67-8 52078-68-9  
52686-20-1 52724-47-7 83783-56-6  
93838-97-2 99876-84-3 102407-84-1  
102407-85-2 102407-86-3 102407-87-4  
102407-88-5 102407-89-6 102407-90-9  
102407-91-0 102407-92-1 102407-93-2  
102407-94-3  
(electronic energy level and spectral sensitivity of)  
RN 905-96-4 HCAPLUS  
CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylydene)-1-  
propenyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 1054-00-8 HCAPLUS

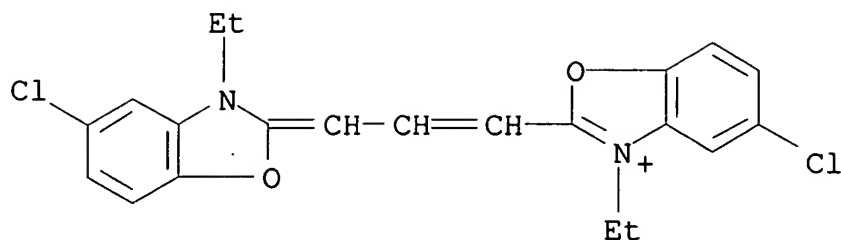
CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 1054-05-3 HCAPLUS

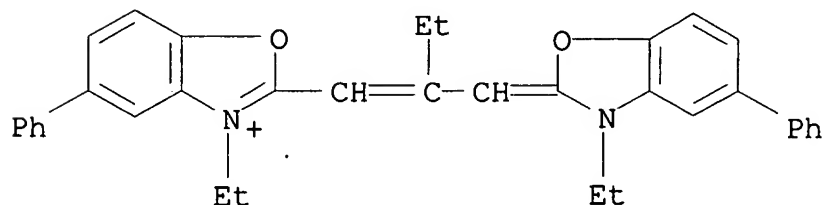
CN Benzoxazolium, 5-chloro-2-[3-(5-chloro-3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 14331-21-6 HCAPLUS

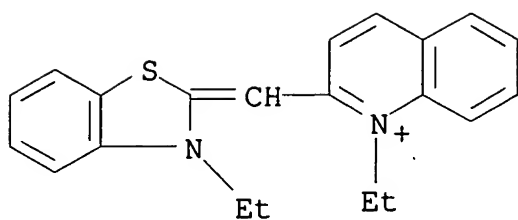
CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-5-phenyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 16025-99-3 HCAPLUS

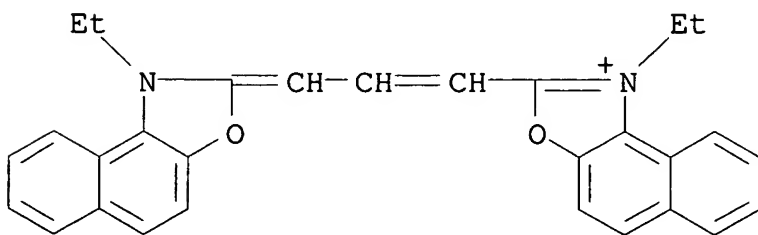
CN Quinolinium, 1-ethyl-2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 28993-84-2 HCAPLUS

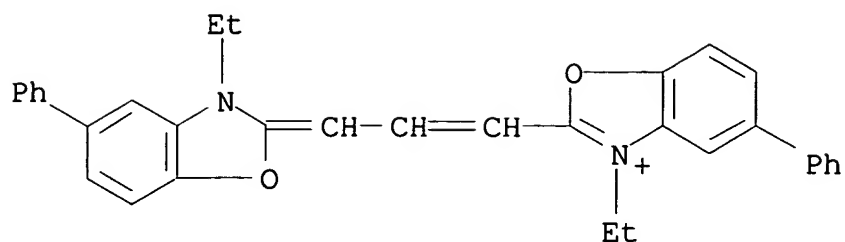
CN Naphth[1,2-d]oxazolium, 1-ethyl-2-[3-(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

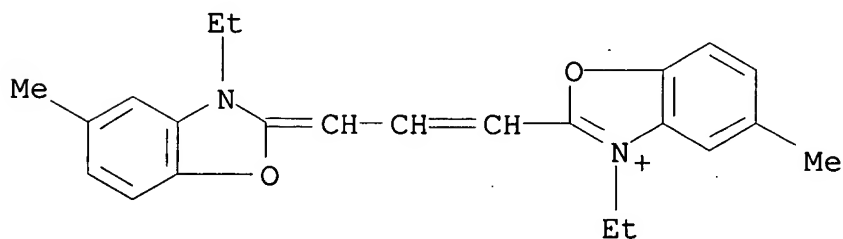
RN 38869-78-2 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-phenyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

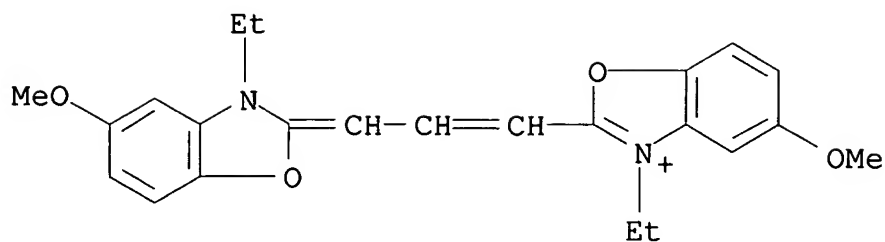
RN 52078-67-8 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-5-methyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-methyl-, iodide (9CI). (CA INDEX NAME)

● I<sup>-</sup>

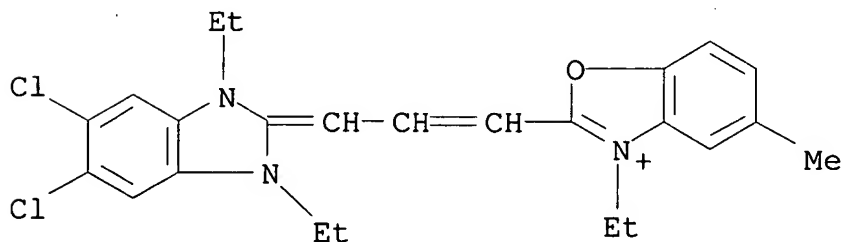
RN 52078-68-9 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-5-methoxy-2(3H)-benzoxazolylidene)-1-propenyl]-5-methoxy-, iodide (9CI). (CA INDEX NAME)

● I<sup>-</sup>

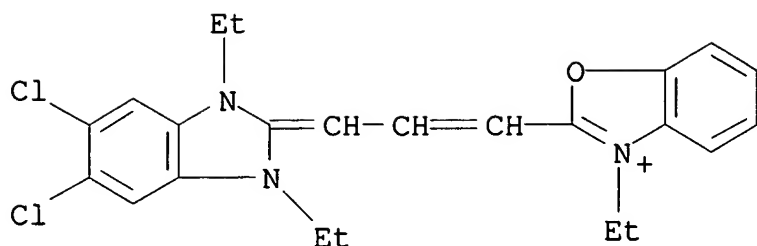
RN 52686-20-1 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

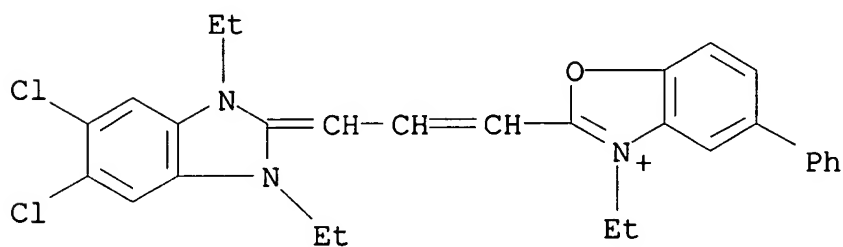
RN 52724-47-7 HCAPLUS

CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 83783-56-6 HCAPLUS

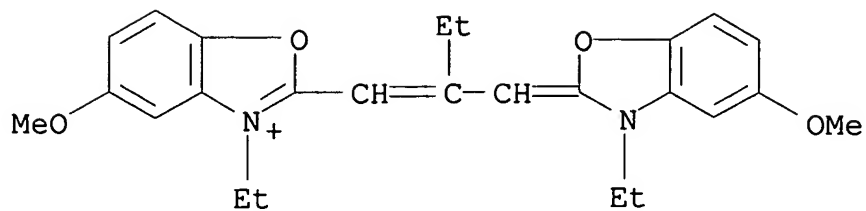
CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-5-phenyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 93838-97-2 HCAPLUS

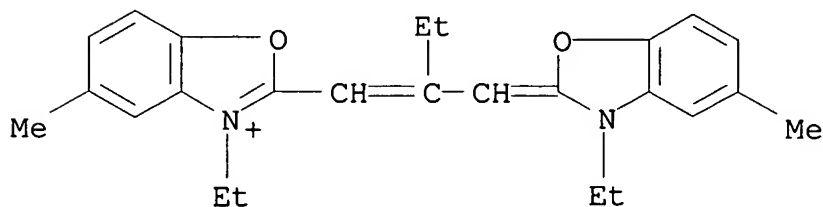
CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-methoxy-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-5-methoxy-, iodide (9CI) (CA INDEX NAME)





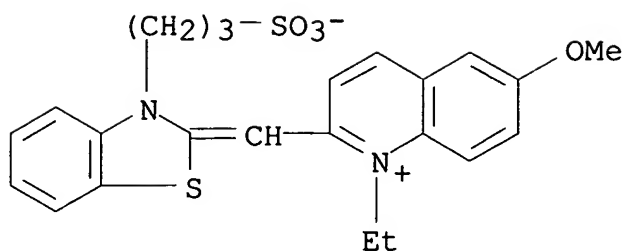
RN 99876-84-3 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-methyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-5-methyl-, iodide (9CI) (CA INDEX NAME)



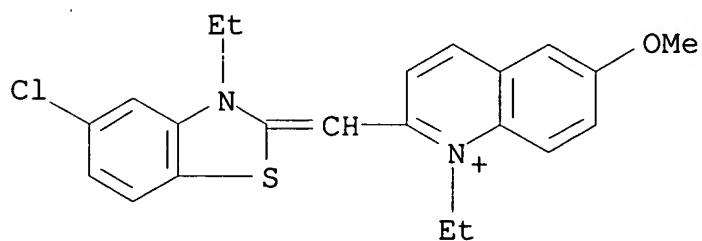
RN 102407-84-1 HCAPLUS

CN Quinolinium, 1-ethyl-6-methoxy-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 102407-85-2 HCAPLUS

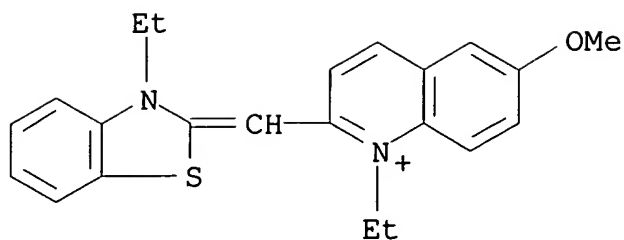
CN Quinolinium, 2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-ethyl-6-methoxy-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

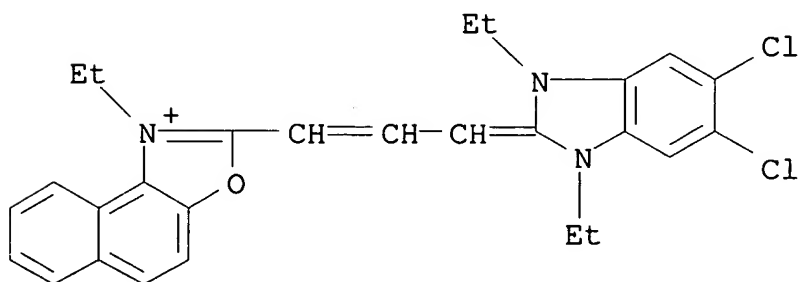
RN 102407-86-3 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-6-methoxy-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

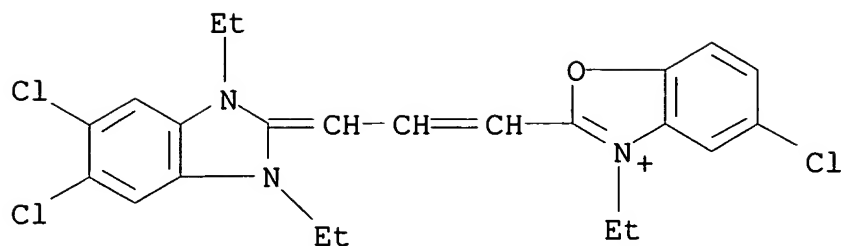
RN 102407-87-4 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 102407-88-5 HCAPLUS

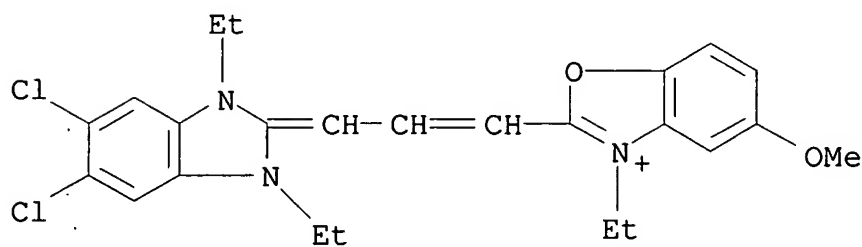
CN Benzoxazolium, 5-chloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 102407-89-6 HCAPLUS

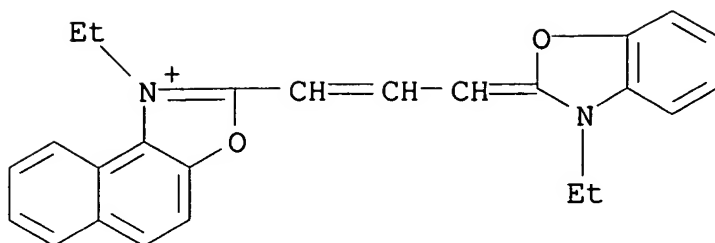
CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-5-methoxy-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

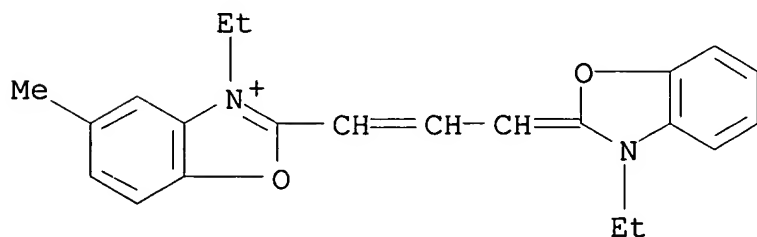
RN 102407-90-9 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

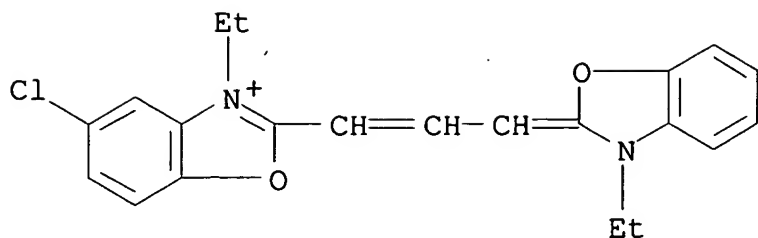
RN 102407-91-0 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-methyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

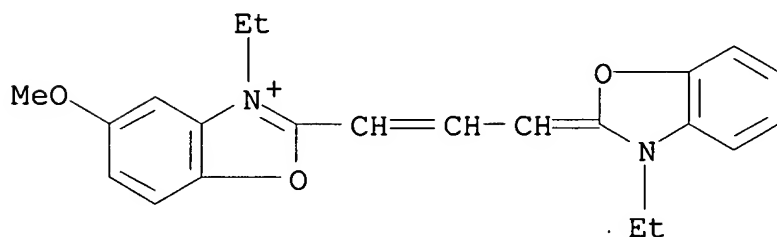
RN 102407-92-1 HCAPLUS

CN Benzoxazolium, 5-chloro-3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

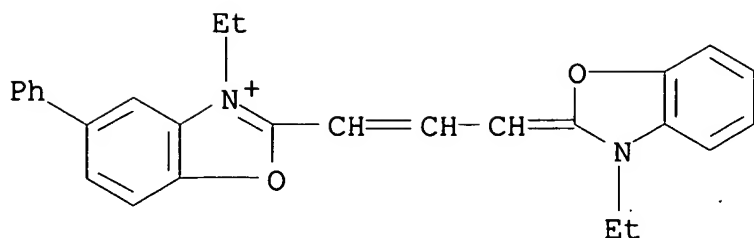
RN 102407-93-2 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-methoxy-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 102407-94-3 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-1-propenyl]-5-phenyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

Section cross-reference(s): 41

IT **905-96-4 1054-00-8 1054-05-3**  
**14331-21-6 16025-99-3 28993-84-2**  
**38869-78-2 52078-67-8 52078-68-9**  
**52686-20-1 52724-47-7 83783-56-6**  
**93838-97-2 99876-84-3 102407-84-1**  
**102407-85-2 102407-86-3 102407-87-4**  
**102407-88-5 102407-89-6 102407-90-9**  
**102407-91-0 102407-92-1 102407-93-2**  
**102407-94-3**

(electronic energy level and spectral sensitivity of)

L29 ANSWER 44 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:586854 HCAPLUS

DOCUMENT NUMBER: 103:186854

TITLE: Silver halide photographic **green sensitizers**

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 60108838	A2	19850614 ✓	JP 1983-216927	

USHA SHRESTHA REM 4B28

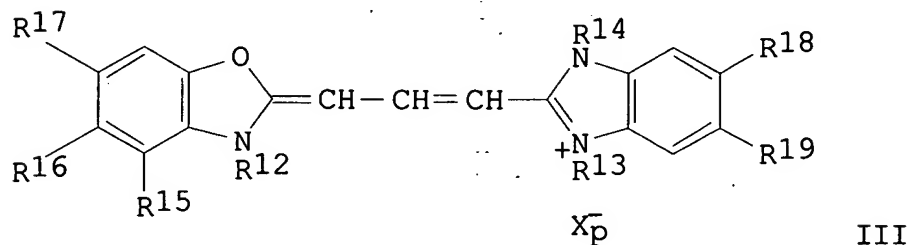
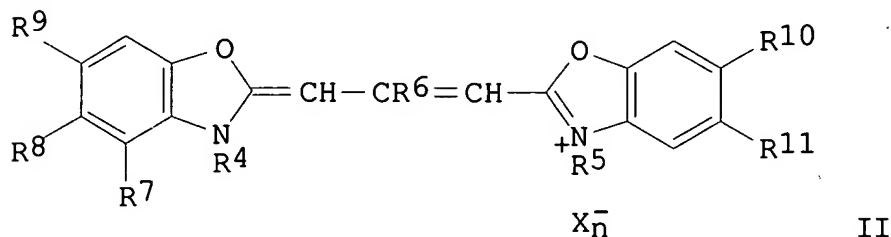
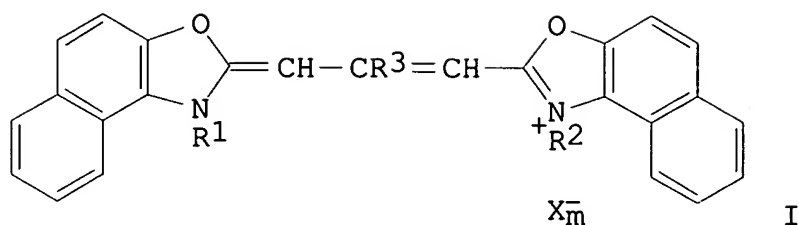
1983  
1117JP 03002286  
PRIORITY APPLN. INFO.:

B4 19910114

JP 1983-216927

1983  
1117

GI



AB A Ag halide photog. material with improved high sensitivity especially in the green light wavelength region of 520-580 nm which provides images with reduced stain due to the residual sensitizing dyes after development contains  $\geq 1$  compound of the structure I and II or III in the emulsions (R1, R2 = C $\leq$ 6 alkyl,  $\gamma$ -sulfopropyl,  $\gamma$ -sulfobutyl,  $\delta$ -sulfobutyl,  $\geq 1$  of R1 and R2 is sulfoalkyl; R3 = Me, Et, Pr, Bu, PhEt;



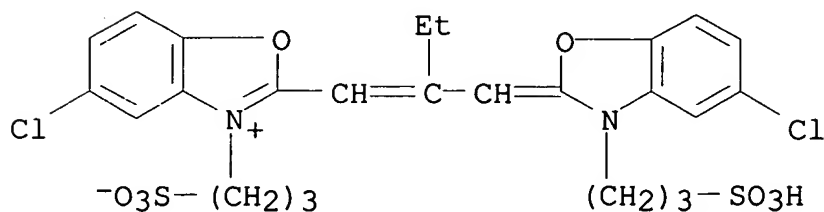
Xm- = acidic anion; m = 0, 1; R4, R5 = C<6 alkyl,  $\gamma$ -sulfoethyl,  $\gamma$ -sulfopropyl,  $\delta$ -sulfobutyl,  $\gamma$ -sulfobutyl, hydroxyalkyl, C<6 alkoxyalkyl, HO2CCH2, HO2CCH2CH2, HO2CCH2CH2CH2,  $\geq 1$  of R4 and R5 is sulfoalkyl; R6 = C<4 alkyl; Xn- = acidic anion; n = 0, 1; R8, R11 = C<4 alkyl, C<4 alkoxy, halo, H, OH, Ph; R9, R10 = H, Me, Et, Cl; R7, R8 = H or may form a benzene ring,  $\geq 1$  of R8, R9, R10, R11 is Cl or Ph; R12, R13, R14 = C<6 alkyl, C<5 alkoxyalkyl, C<5 fluoroalkyl or chloroalkyl, C<4 carboxyalkyl, HO3SPHCH2, C>2-4 sulfoalkyl; Xp = acidic anion; p = 0, 1; R16 = R8, R17 = R9, R15 = R7; R19 = halo, CN, CF3, C<4 alkylsulfamoyl, C<4 alkylsulfonyl, C<5 alkoxycarbonyl; R18 = H, Cl, F).

IT 18360-25-3 33628-03-4 63148-87-8  
67326-80-1 68162-29-8 98205-31-3  
98205-32-4 98205-33-5 98205-34-6  
98205-35-7 98205-36-8 98205-37-9  
98223-61-1 98223-62-2 98223-63-3  
98966-46-2

(cyanine dye photog. **green sensitizer**, silver halide photog. materials containing, for improved high sensitivity in green region of visible spectrum and reduced stain)

RN 18360-25-3 HCAPLUS

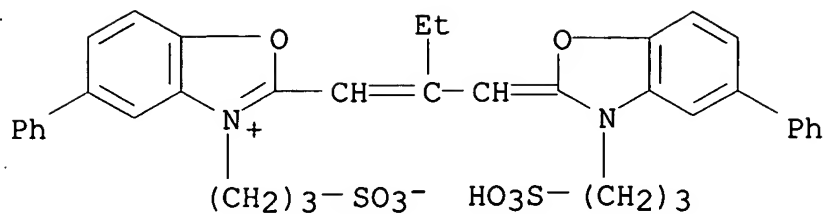
CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 33628-03-4 HCAPLUS

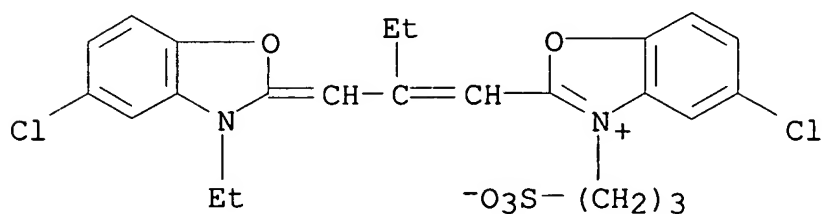
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

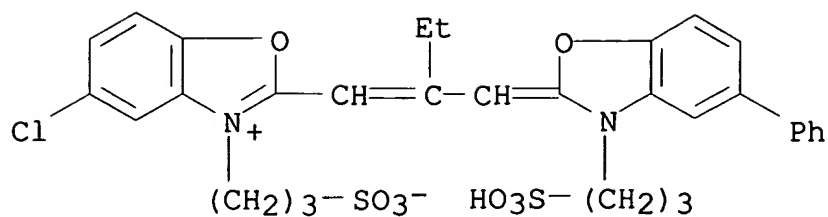
RN 63148-87-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 67326-80-1 HCAPLUS

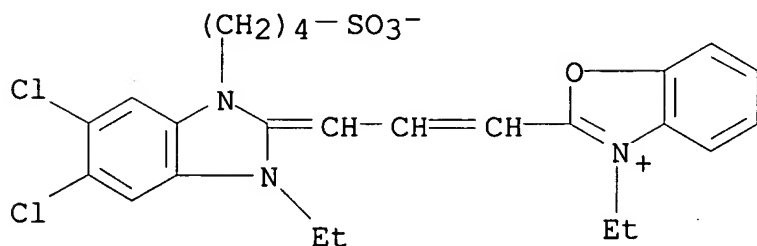
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

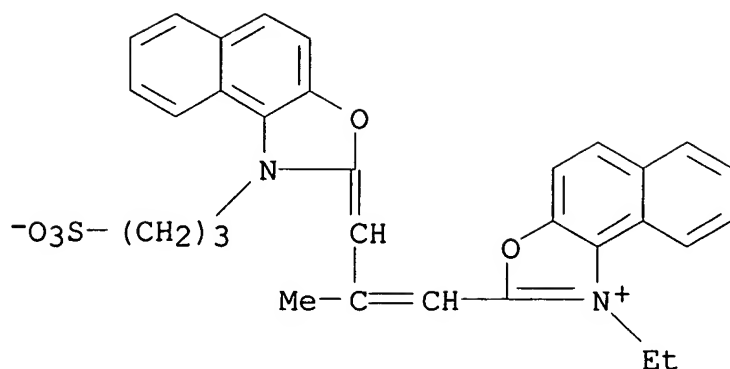
RN 68162-29-8 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



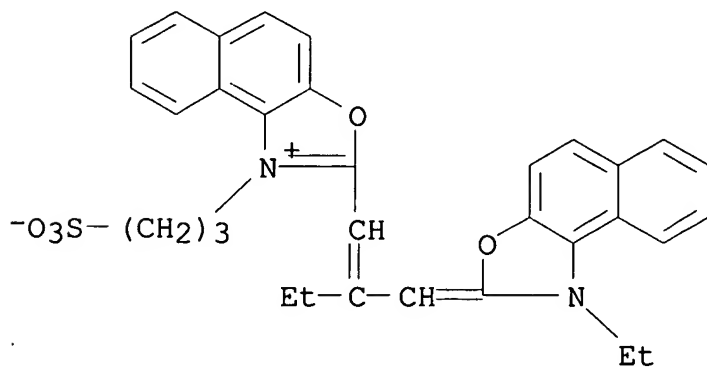
RN 98205-31-3 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-ethyl-2-[2-methyl-3-[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)



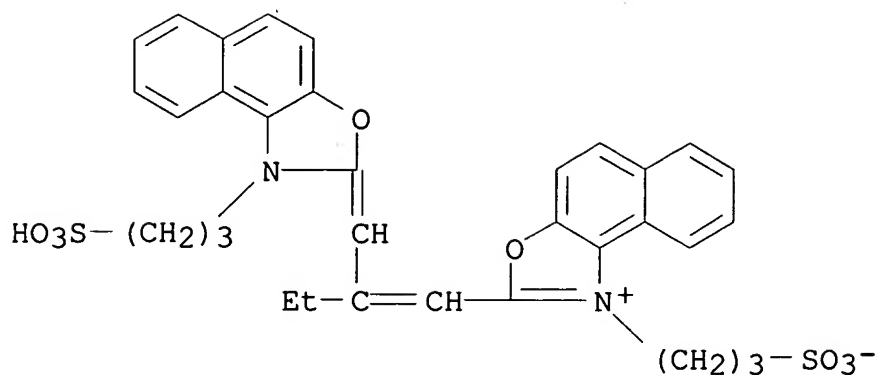
RN 98205-32-4 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[2-[(1-ethylnaphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-1-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



RN 98205-33-5 HCAPLUS

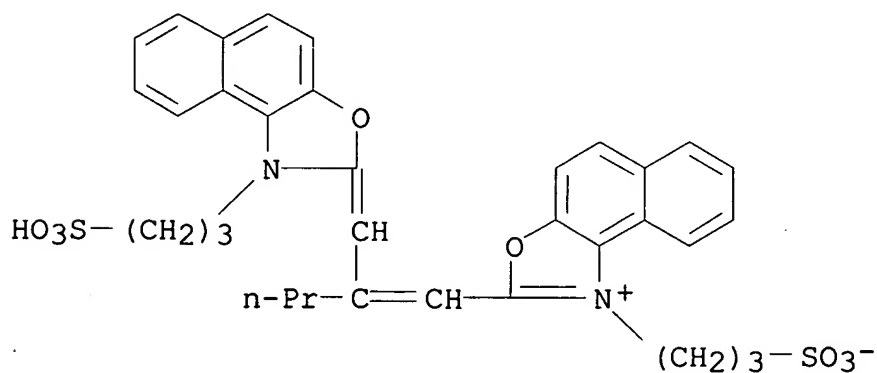
CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene)methyl]-1-butenyl]-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 98205-34-6 HCAPLUS

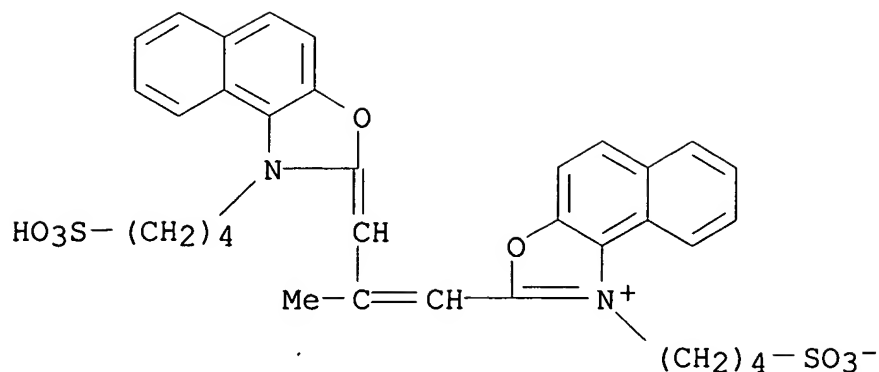
CN Naphth[1,2-d]oxazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphth[1,2-d]oxazol-2(1H)-ylidene]methyl]-1-pentenyl]-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 98205-35-7 HCAPLUS

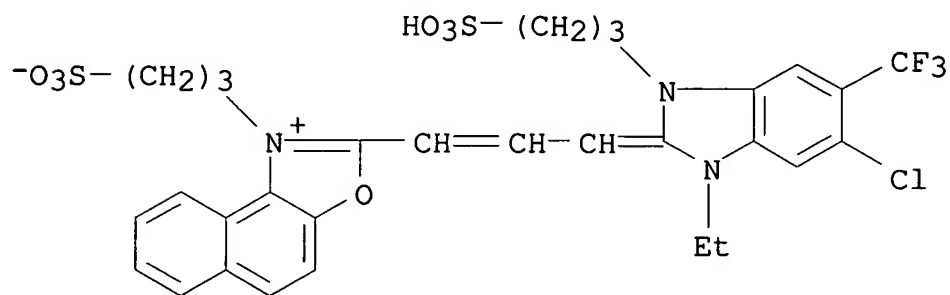
CN Naphth[1,2-d]oxazolium, 2-[2-methyl-3-[1-(4-sulfobutyl)naphth[1,2-d]oxazol-2(1H)-ylidene]-1-propenyl]-1-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

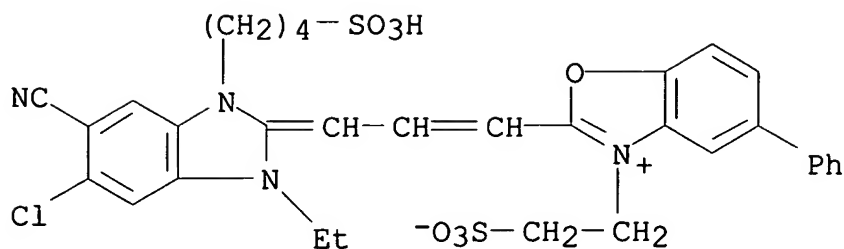
RN 98205-36-8 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-[5-chloro-3-ethyl-1,3-dihydro-1-(3-sulfopropyl)-6-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 98205-37-9 HCAPLUS

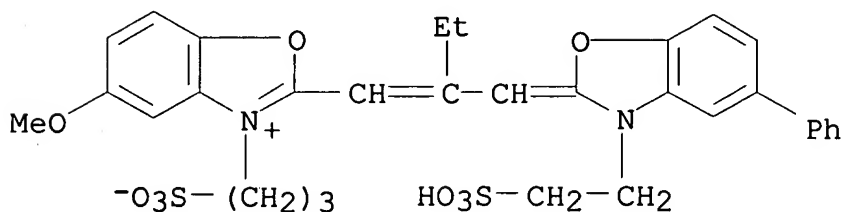
CN Benzoxazolium, 2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 98223-61-1 HCAPLUS

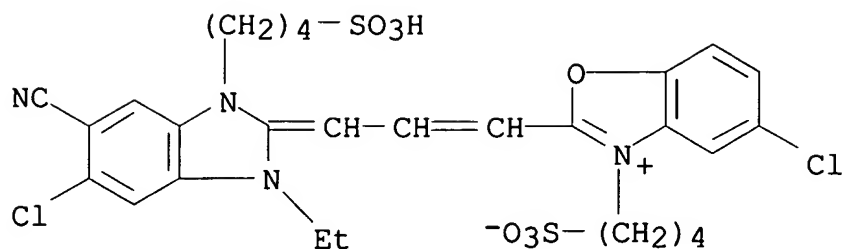
CN Benzoxazolium, 5-methoxy-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 98223-62-2 HCAPLUS

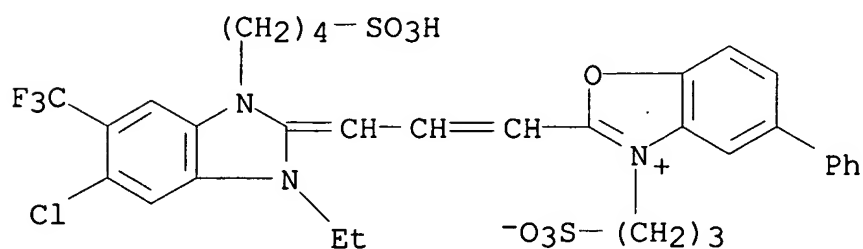
CN Benzoxazolium, 5-chloro-2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 98223-63-3 HCAPLUS

CN Benzoxazolium, 2-[3-[5-chloro-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-6-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)

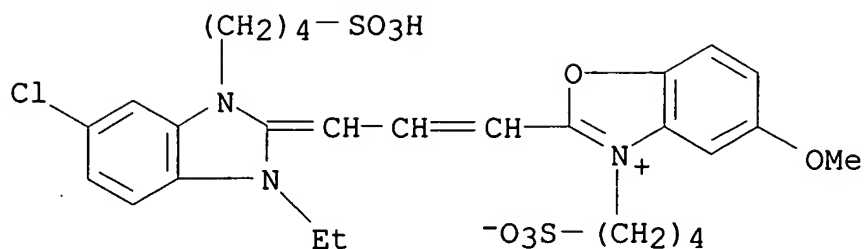


● K

RN 98966-46-2 HCAPLUS

CN Benzoxazolium, 2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-methoxy-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)





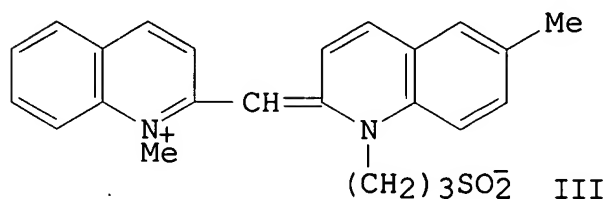
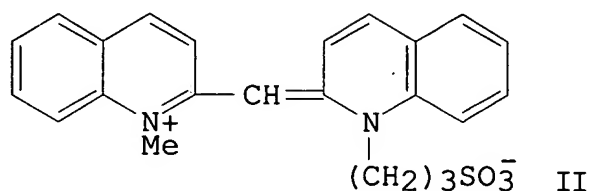
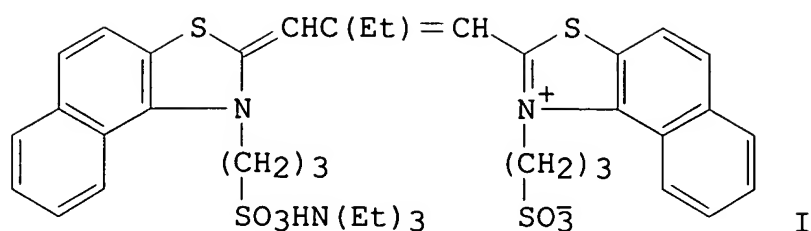
● K

IC ICM G03C001-28  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 ST silver halide photog **green sensitizer**  
 IT 18360-25-3 33628-03-4 63148-87-8  
 67326-80-1 68162-29-8 98205-31-3  
 98205-32-4 98205-33-5 98205-34-6  
 98205-35-7 98205-36-8 98205-37-9  
 98223-61-1 98223-62-2 98223-63-3  
 98966-46-2  
 (cyanine dye photog. **green sensitizer**,  
 silver halide photog. materials containing, for improved high  
 sensitivity in green region of visible spectrum and reduced  
 stain)

L29 ANSWER 45 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1985:550794 HCAPLUS  
 DOCUMENT NUMBER: 103:150794  
 TITLE: Adsorption of photographic  
 spectral-sensitizing dyes and their  
 combinations on the surface of silver bromide  
 and enthalpies of adsorption measurements  
 AUTHOR(S): Zhang, Wenming; Shen, Jieru; Zhang, Zuxun;  
 Zhong, Guangxue  
 CORPORATE SOURCE: Chem. Dep., Northwestern Univ., Xian, Peop.  
 Rep. China  
 SOURCE: Guangxue Kexue Yu Guang Huaxue (1985), (2),  
 1-8  
 CODEN: GKKHE9; ISSN: 1000-3231  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

USHA SHRESTHA REM 4B28

GI



AB The light absorption and adsorption properties were studied of three cyanine dyes I, II, III were studied in solution and in their adsorbed states. Adsorption isotherms of dyes on suspended AgBr at 25° and the absorption (reflection) spectra of dyes in solns. and in adsorbed states were obtained. Very small heat affects (<10 mcal) accompanying dye adsorption were measured with the Versatile Model BD-1 Precision Semiconductor Calorimetric System using a specially designed calorimetric unit. The isosteric molar enthalpy of I adsorption on AgBr in H<sub>2</sub>O was  $-(33.5 \pm 2.5)$  kJ/mol (surface coverage  $\theta = 94\%$ ). Dye combination study, spectra, isotherms as well as heat of adsorption, indicate further adsorption of dye I on AgBr dyed with II and/or III, forming possibly multilayers over the first layer of II and/or III, while no (or very little) adsorption of II and/or III can take place over dye I. This clarifies the fact that in the photog. emulsion production, the **green sensitive** dyes II and III must be added prior to the

adding of I to ensure supersensitization. The results show that enthalpy measurements in combination with spectroscopy may be helpful for studying the sensitizing effect in photog. emulsion production

IT **23216-67-3 34935-36-9 92511-03-0**

(spectroscopic and enthalpy measurements of adsorption of, on silver bromide surface)

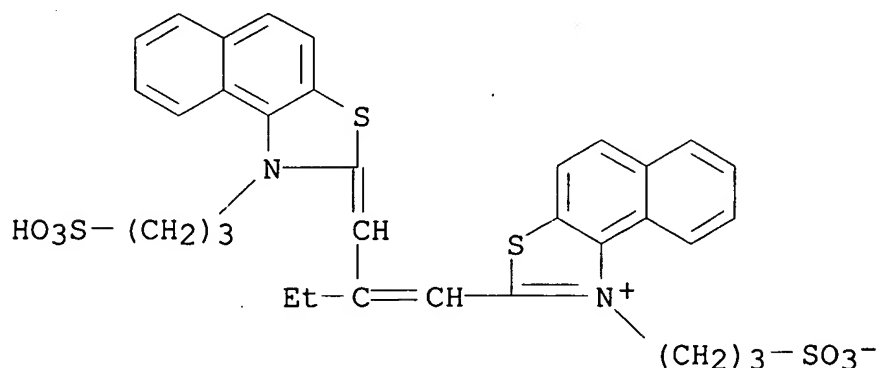
RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 4622-66-6

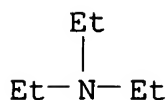
CMF C33 H32 N2 O6 S4



CM 2

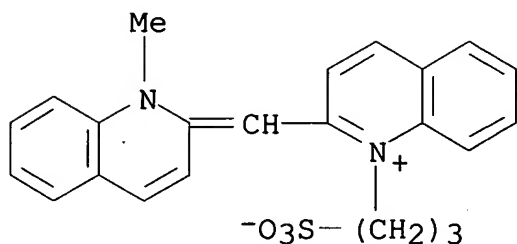
CRN 121-44-8

CMF C6 H15 N



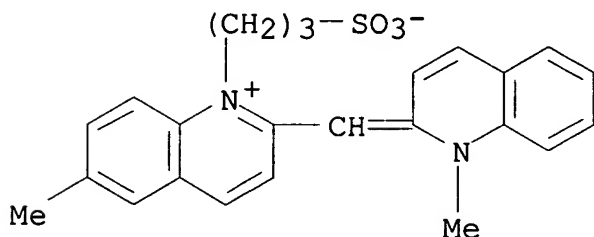
RN 34935-36-9 HCAPLUS

CN Quinolinium, 2-[(1-methyl-2(1H)-quinolinylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 92511-03-0 HCAPLUS

CN Quinolinium, 6-methyl-2-[(1-methyl-2(1H)-quinolinylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT 23216-67-3 34935-36-9 92511-03-0

(spectroscopic and enthalpy measurements of adsorption of, on silver bromide surface)

L29 ANSWER 46 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:479404 HCAPLUS

DOCUMENT NUMBER: 103:79404

TITLE: Silver halide photosensitive materials

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60041036	A2	19850304	JP 1983-148768	1983 0816
JP 05001451	B4	19930108	JP 1983-148768	1983 0816

PRIORITY APPLN. INFO.:

GI For diagram(s), see printed CA Issue.

AB The title materials consist of a support and  $\geq 1$  Ag halide emulsion layer containing  $\geq 1$  sensitizing dye I and/or II (X = O, S, Se; A = atomic grouping to form oxazole or oxazoline ring; X- = anion; R1 = H, alkyl, aryl; R2, R3 = alkyl; R4-7 = H, alkyl, halo, alkoxy, aryl, carboxyl, alkoxycarbonyl, aryloxycarbonyl, nitro, hydroxy, cyano, amino, acylamino, sulfonylamino, acyloxy, carbamoyl, sulfamoyl, sulfonyl, acyl, heterocycle moiety; R4R5, R5R6, and/or R6R7 may be combined to form a ring; m = 1, 2; when I forms an inner salt, m = 1; X1, X2 = S, Se; B, D = atomic grouping to form thiazole, benzothiazole, naphthothiazole, selenazole, benzoselenazole, or naphthoselenazole ring; R8 = H, alkyl, aryl; R9, R10 = alkyl; n = 1, 2; when II forms an inner salt, n = 1). The materials show high spectral sensitivity and do not cause photog. fog. Thus, 3.9 g III, 4.5 g IV, 80 mL MeOH, and 3 g Et3N were mixed and stirred at room temperature for 30 min and at 100° for 1 h to obtain V with  $\lambda_{\max}$  (MeOH) 522 nm. Then, 1 kg AgBr/AgI emulsion, 20 + 10<sup>-5</sup> mol V, and 20 + 10<sup>-5</sup> mol VI were mixed in MeOH and stirred, then mixed with 20 mL 10% aqueous 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene, 10 mL 1% aqueous 1-hydroxy-3,5-dichlorotriazine Na salt, and 10 mL 1% aqueous Na dodecylbenzenesulfonate and coated on a cellulose triacetate film support to form a 5- $\mu$ -thick photosensitive layer. The material upon wedge exposure using a yellow filter showed a good sensitivity of 235 vs. 131 without VI and 140 without V.

IT **60760-26-1**

(photog. sensitizer combination containing)

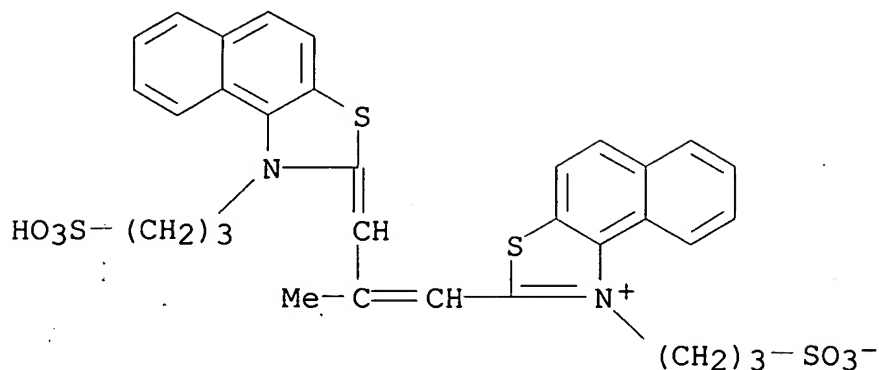
RN 60760-26-1 HCAPLUS

CM Naphtho[1,2-d]thiazolium, 2-[2-methyl-3-[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 16704-72-6

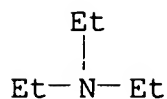
CMF C32 H30 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N

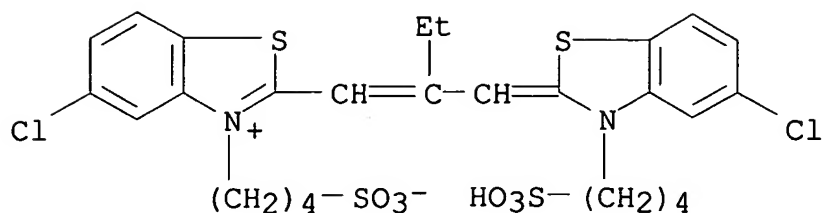


IT 20904-74-9 23216-66-2 33904-73-3  
 54290-15-2 97607-00-6 97607-01-7  
 97607-02-8 97607-04-0 97607-05-1  
 97607-06-2 97607-08-4 97607-09-5  
 97607-10-8 97626-60-3 97626-61-4

(photog. spectral sensitizer combination containing)

RN 20904-74-9 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



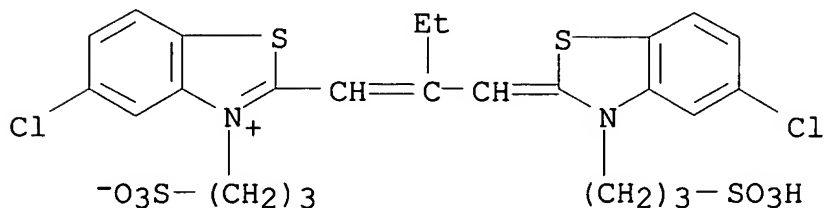
RN 23216-66-2 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylydene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 23568-98-1

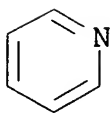
CMF C25 H26 Cl2 N2 O6 S4



CM 2

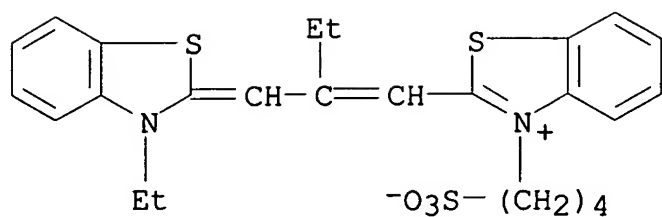
CRN 110-86-1

CMF C5 H5 N



RN 33904-73-3 HCAPLUS

CN Benzothiazolium, 2-[2-[(3-ethyl-2(3H)-benzothiazolylydene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



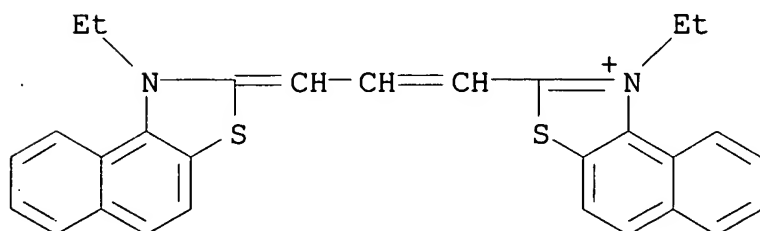
RN 54290-15-2 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-ethyl-2-[3-(1-ethylnaphtho[1,2-d]thiazol-2(1H)-ylidene)-1-propenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 53179-50-3

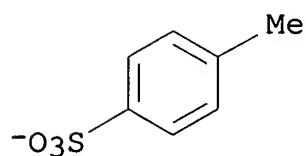
CMF C29 H25 N2 S2



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

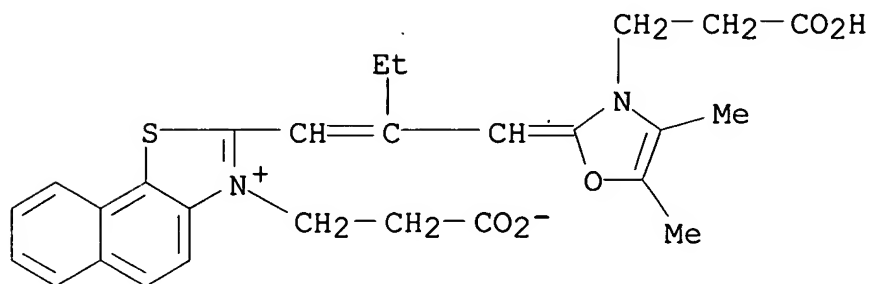


RN 97607-00-6 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 3-(2-carboxyethyl)-2-[2-[[3-(2-

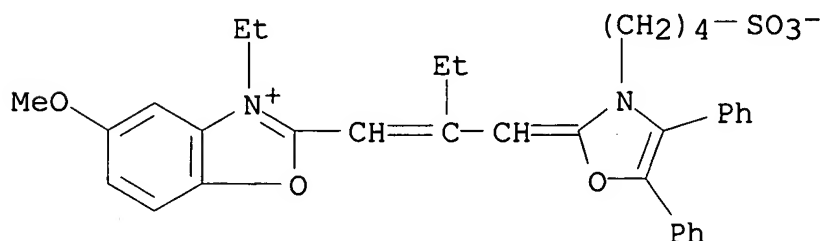


carboxyethyl)-4,5-dimethyl-2(3H)-oxazolyliidene)methyl]-1-butenyl]-  
 , inner salt (9CI) (CA INDEX NAME)



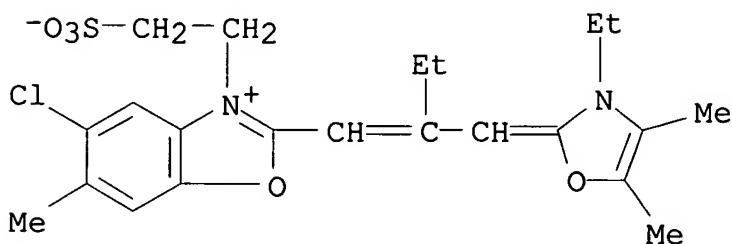
RN 97607-01-7 HCAPLUS

CN Benzoxazolium, 2-[2-[[4,5-diphenyl-3-(4-sulfoethyl)-2(3H)-  
 oxazolyliidene)methyl]-1-butenyl]-3-ethyl-5-methoxy-, inner salt  
 (9CI) (CA INDEX NAME)



RN 97607-02-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[(3-ethyl-4,5-dimethyl-2(3H)-  
 oxazolyliidene)methyl]-1-butenyl]-6-methyl-3-(2-sulfoethyl)-, inner  
 salt (9CI) (CA INDEX NAME)



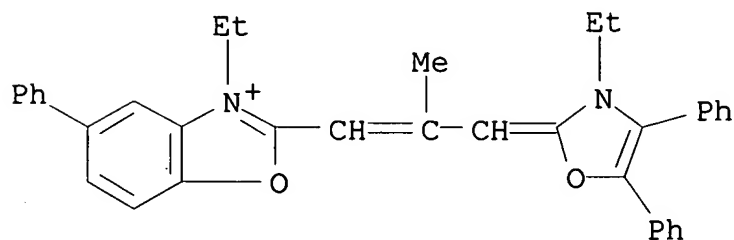
RN 97607-04-0 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-4,5-diphenyl-2(3H)-oxazolyli-  
dene)-2-methyl-1-propenyl]-5-phenyl-, perchlorate (9CI)  
(CA INDEX NAME)

CM 1

CRN 97607-03-9

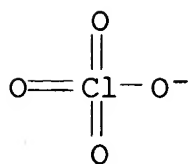
CMF C36 H33 N2 O2



CM 2

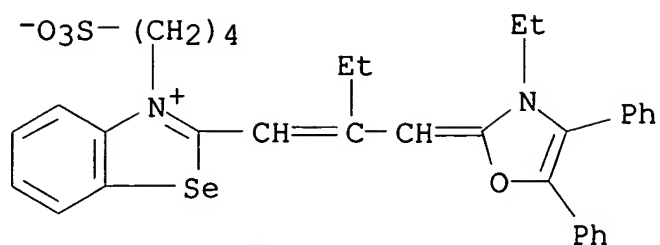
CRN 14797-73-0

CMF Cl O4



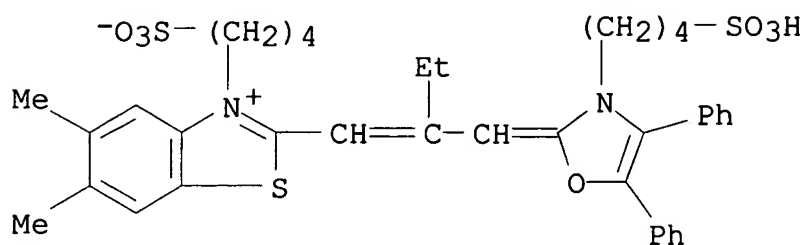
RN 97607-05-1 HCAPLUS

CN Benzoselenazolium, 2-[2-[(3-ethyl-4,5-diphenyl-2(3H)-oxazolyli-  
dene)methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt  
(9CI) (CA INDEX NAME)



RN 97607-06-2 HCAPLUS

CN Benzothiazolium, 2-[2-[[4,5-diphenyl-3-(4-sulfobutyl)-2(3H)-oxazolyliidene]methyl]-1-butenyl]-5,6-dimethyl-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

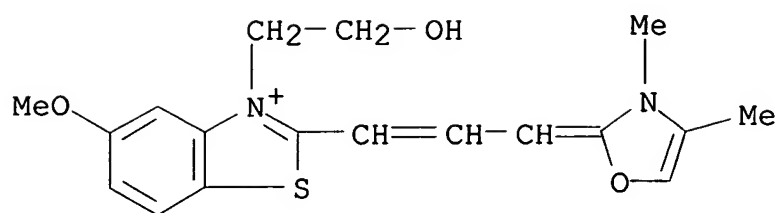
RN 97607-08-4 HCAPLUS

CN Benzothiazolium, 2-[3-(3,4-dimethyl-2(3H)-oxazolyliidene)-1-propenyl]-3-(2-hydroxyethyl)-5-methoxy-, perchlorate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 97607-07-3

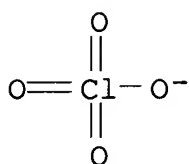
CMF C18 H21 N2 O3 S



CM 2

CRN 14797-73-0

CMF Cl O4



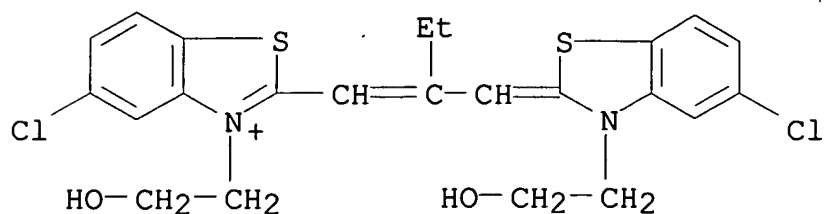
RN 97607-09-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(2-hydroxyethyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(2-hydroxyethyl)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

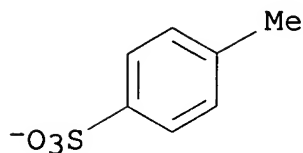
CRN 28784-37-4

CMF C23 H23 Cl2 N2 O2 S2

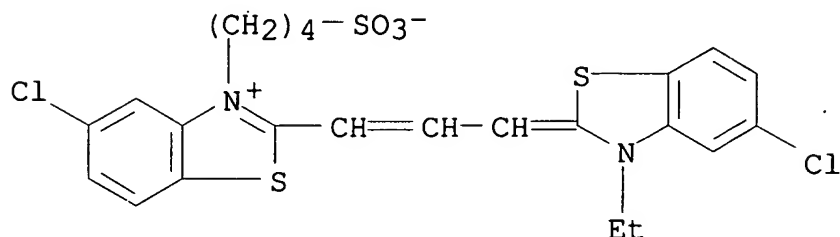


CM 2

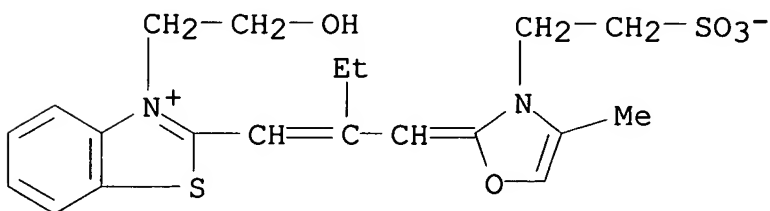
CRN 16722-51-3  
CMF C7 H7 O3 S



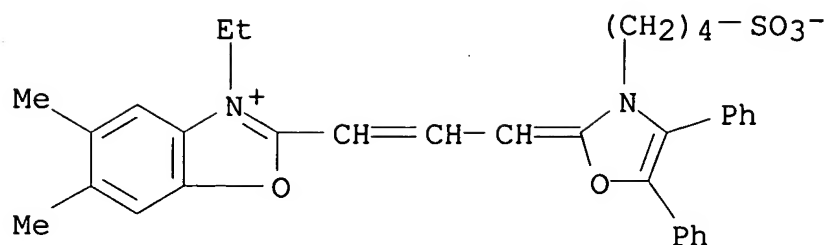
RN 97607-10-8 HCAPLUS  
CN Benzothiazolium, 5-chloro-2-[3-(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-(4-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 97626-60-3 HCAPLUS  
CN Benzothiazolium, 3-(2-hydroxyethyl)-2-[2-[[4-methyl-3-(2-sulfoethyl)-2(3H)-oxazolylidene]methyl]-1-butenyl]-, inner salt (9CI) (CA INDEX NAME)



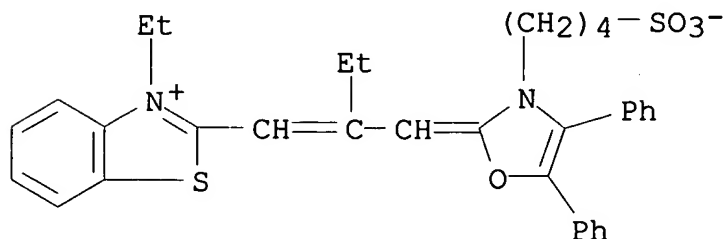
RN 97626-61-4 HCAPLUS  
CN Benzoxazolium, 2-[3-[4,5-diphenyl-3-(4-sulfoethyl)-2(3H)-oxazolylidene]-1-propenyl]-3-ethyl-5,6-dimethyl-, inner salt (9CI) (CA INDEX NAME)

IT **97453-83-3P**

(preparation of, as photog. sensitizer)

RN 97453-83-3 HCAPLUS

CN Benzothiazolium, 2-[2-[[4,5-diphenyl-3-(4-sulfobutyl)-2(3H)-oxazolylidene]methyl]-1-butenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C001-28

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

ST spectral **sensitization green** photog emulsionIT **60760-26-1**

(photog. sensitizer combination containing)

IT **20904-74-9 23216-66-2 33904-73-3****54290-15-2 97607-00-6 97607-01-7****97607-02-8 97607-04-0 97607-05-1****97607-06-2 97607-08-4 97607-09-5****97607-10-8 97626-60-3 97626-61-4**

(photog. spectral sensitizer combination containing)

IT **97453-83-3P**

(preparation of, as photog. sensitizer)

L29 ANSWER 47 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:158121 HCAPLUS

DOCUMENT NUMBER: 102:158121

TITLE: Color photothermographic process  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 59180550	A2	19841013 ✓	JP 1983-55694	1983 0331

PRIORITY APPLN. INFO.: JP 1983-55694  
1983  
0331

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*

AB A color photothermog. process is claimed in which a photothermog. sheet having  $\geq 3$  Ag halide emulsion layers having different spectral sensitivities and containing yellow, cyan, and magenta dye-releasing compds. (reducing agent type) in appropriate emulsion layers or nonsensitive layers adjacent to the emulsion layers is imagewise exposed and heated simultaneously or sequentially in the absence of water to form hydrophilic diffusible dye images. Thus, a film support was coated with a red-sensitive emulsion containing sensitizer dye I, cyan dye-releasing compound II, guanidine trichloroacetate, dimethylsulfamide, and a surfactant, coated with an interlayer, coated with a **green -sensitive** emulsion containing dye III, magenta dye-releasing compound IV and other additives (same as the red sensitive layer), and after the formation of a 2nd interlayer, a blue-sensitive emulsion layer containing yellow dye-releasing compound V and other additives and a protective layer were formed to give a color photothermog. film. The film was imagewise exposed through

a color separation filter, heated at 130°, and contacted with a wetted receptor having a dye-mordanting layer at 80° to give clear 3-color images on the receptor.

IT 23216-67-3 28413-71-0 34021-09-5  
93054-07-0

(color photothermog. sensitizer)

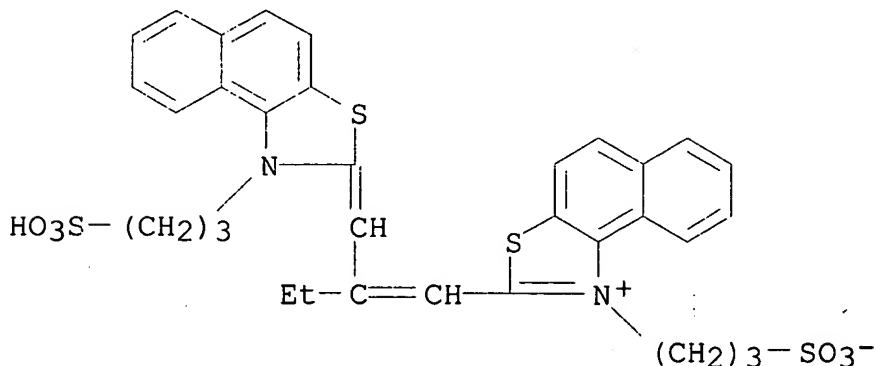
RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 4622-66-6

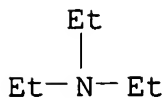
CMF C33 H32 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



RN 28413-71-0 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-

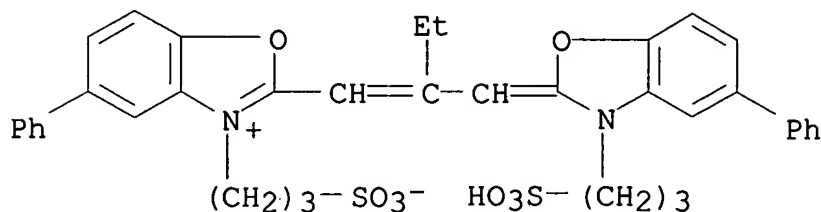


benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29133-39-9

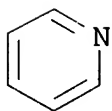
CMF C37 H36 N2 O8 S2



CM 2

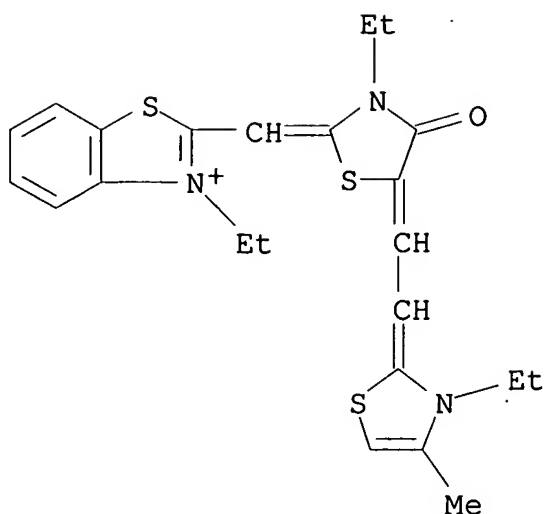
CRN 110-86-1

CMF C5 H5 N



RN 34021-09-5 HCAPLUS

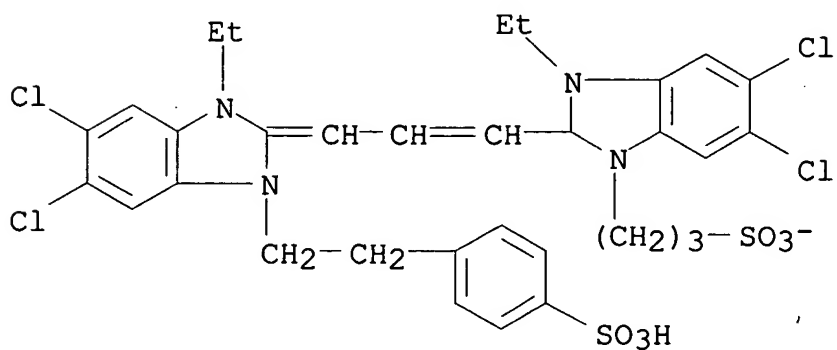
CN Benzothiazolium, 3-ethyl-2-[[3-ethyl-5-[(3-ethyl-4-methyl-2(3H)-thiazolyliidene)ethylidene]-4-oxo-2-thiazolidinyliidene]methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 93054-07-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-[2-(4-sulfophenyl)ethyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

USHA SHRESTHA

REM 4B28

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC G03C007-00; C09B029-00

CC 74-7 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 41

IT **23216-67-3 28413-71-0 34021-09-5**  
**93054-07-0**

(color photothermog. sensitizer)

L29 ANSWER 48 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:36623 HCAPLUS

DOCUMENT NUMBER: 102:36623

TITLE: Silver halide photographic emulsion

INVENTOR(S): Mihara, Yuji; Nagaoka, Satoshi; Okazaki,  
Masaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd. , Japan

SOURCE: Eur. Pat. Appl., 79 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

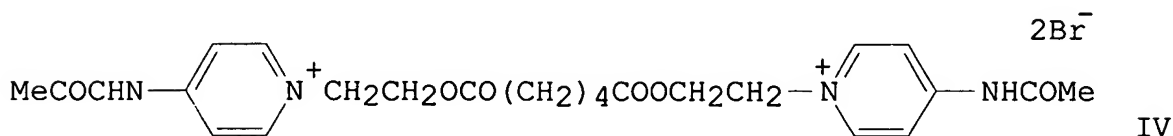
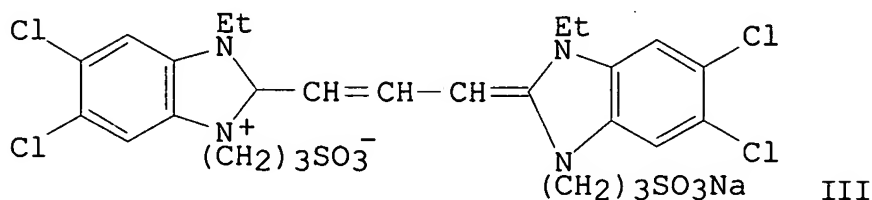
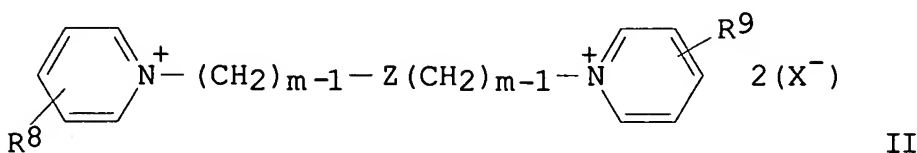
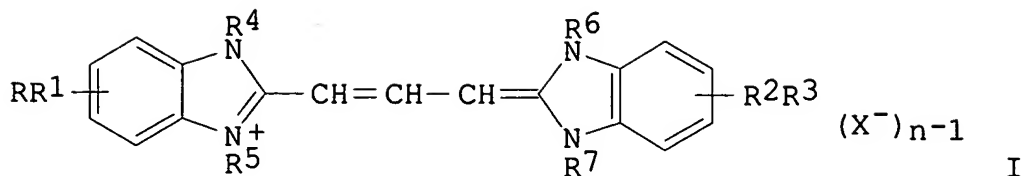
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 116346	A2	19840822	EP 1984-101082	1984 0202
EP 116346	A3	19880113		
EP 116346	B1	19890531		
R: DE, FR, GB				
JP 59142541	A2	19840815	JP 1983-15929	1983 0202
US 4544628	A	19851001	US 1984-576249	1984 0202
PRIORITY APPLN. INFO.:			JP 1983-15929	A 1983 0202

GI



AB A photog. emulsion with enhanced spectral sensitivity in **green-sensitive** region contains a dye sensitizer I (R-R3 = H, halo, alkyl, cycloalkyl, alkenyl, acyl, acyloxy, alkoxy, carbamoyl, sulfamoyl, CN, OH, CF3; R4 - R7 = alkyl, cycloalkyl, alkenyl; X = anion; n = 1, 2) in combination with a compound II (R8, R9 = H, halo, alkyl, alkoxy, acyloxy, alkoxy, amino, acylamido, carbamoyl; Z = alkylene, arylene, aralkylene, CO2-, CO2Z1, OCO where Z1 = alkylene, arylene, aralkylene; X = anion; m = integer of 1-19). Thus, 1 kg of a Ag(Br,I) (I 7.5 mol %) emulsion with a mean grain diameter of 0.85  $\mu$ m and containing 0.62 mol. Ag halide was heated at 40° and mixed with MeOH solns. of III 20 + 10-5 and IV 80 + 10-5 mol. The emulsion was stirred, mixed with 1 weight% aqueous 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene 15, 1 weight% aqueous 1-hydroxy-3,5-dichlorotriazine Na salt 20, and 1 weight% aqueous Na dodecylbenzenesulfonate 10 mL, and coated on a cellulose triacetate support to give a dry layer of 5  $\mu$ . The element was

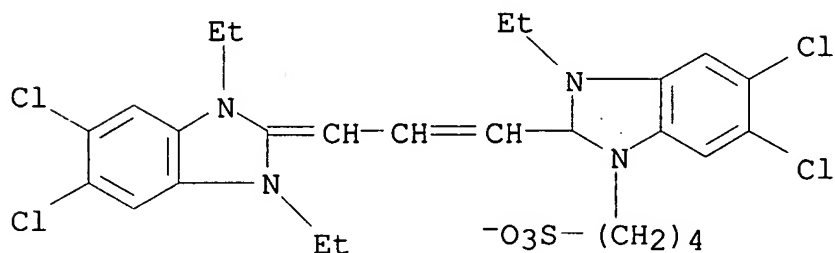
imagewise exposed and processed to give an image with a sensitivity of 191 and a fog of 0.03 vs. 100 and 0.04, resp., for a IV-free control.

IT 6099-53-2 28272-54-0 33628-03-4  
 33628-07-8 93054-07-0 93664-18-7  
 93664-19-8 93664-20-1 93664-21-2  
 93664-22-3 93664-23-4 93664-24-5

(photog. emulsion containing combination of dipyridinium compound and, for increased green spectral sensitivity)

RN 6099-53-2 HCAPLUS

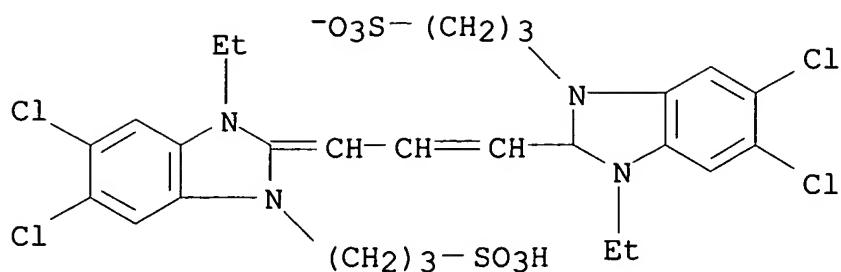
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28272-54-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

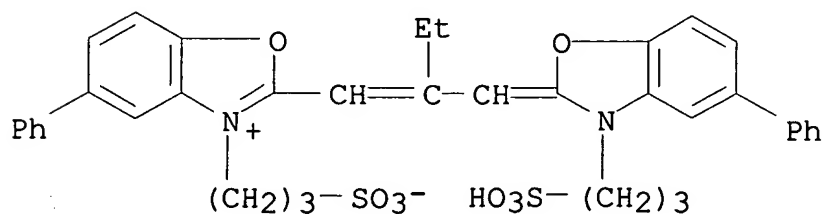


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 33628-03-4 HCAPLUS

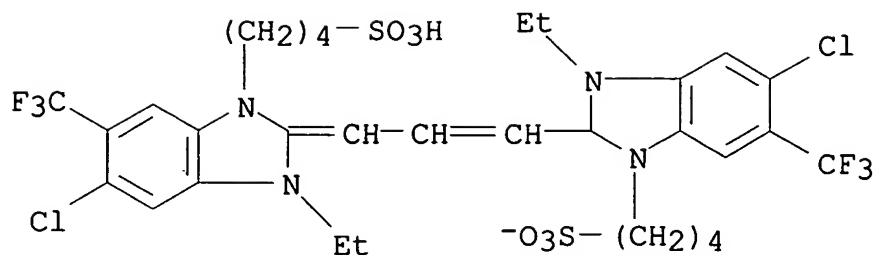
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 33628-07-8 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-6-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-1-(4-sulfobutyl)-6-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

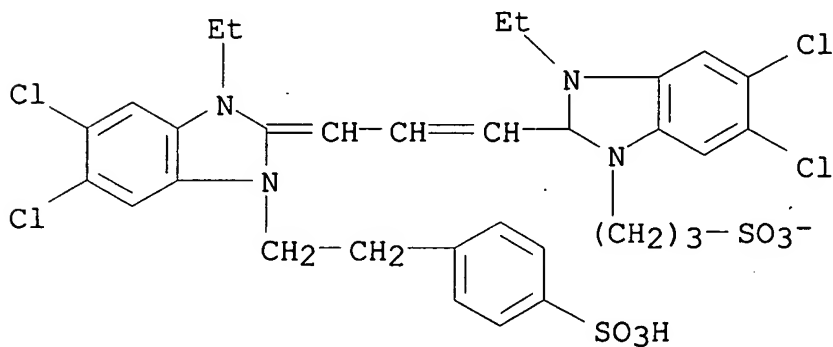


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93054-07-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-[2-(4-sulfophenyl)ethyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

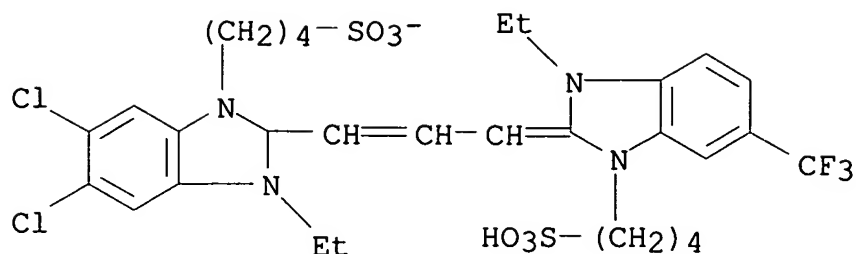


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-18-7 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

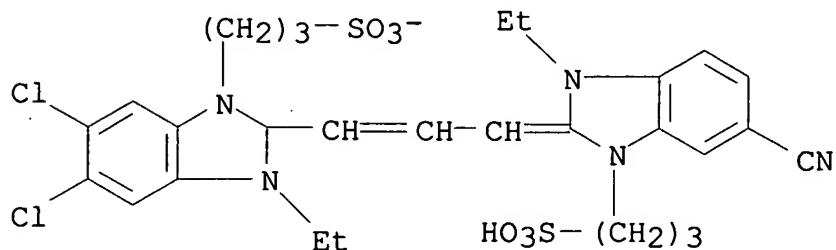


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-19-8 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5-cyano-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



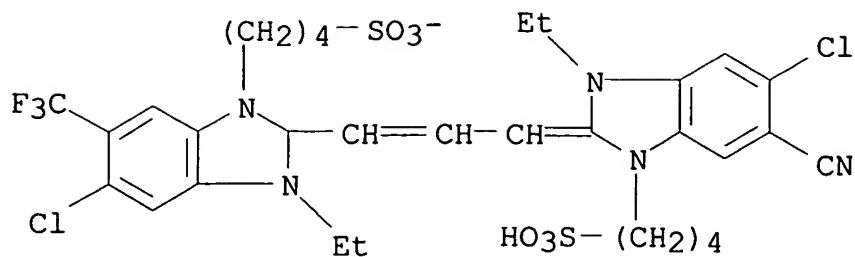
● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-20-1 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-1-(4-sulfobutyl)-6-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



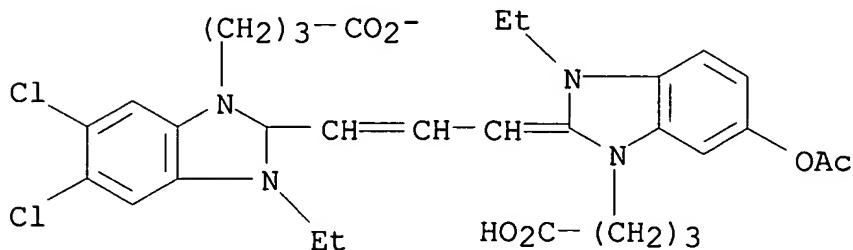


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-21-2 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[5-(acetyloxy)-3-(3-carboxypropyl)-1-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-1-(3-carboxypropyl)-5,6-dichloro-3-ethyl-, inner salt, sodium salt (9CI) (CA INDEX NAME)

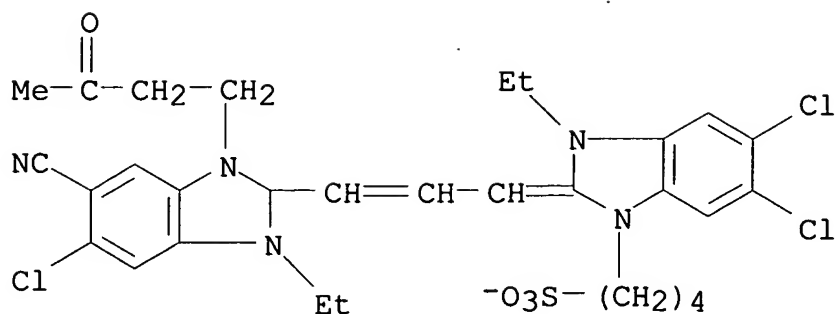


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-22-3 HCAPLUS

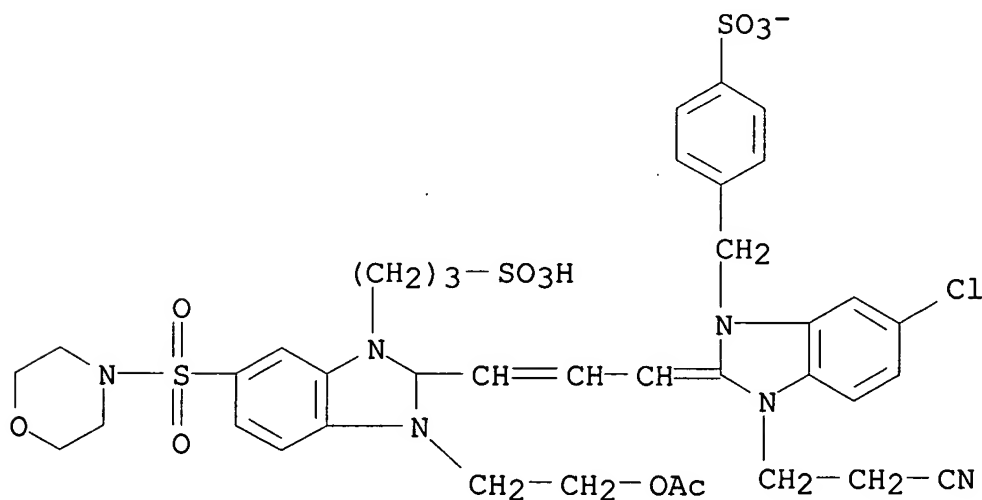
CN 1H-Benzimidazolium, 5-chloro-6-cyano-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-1-(3-oxobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-23-4 HCAPLUS

CN 1H-Benzimidazolium, 1-[2-(acetyloxy)ethyl]-2-[3-[5-chloro-1-(2-cyanoethyl)-1,3-dihydro-3-[(4-sulfophenyl)methyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-5-(4-morpholinylsulfonyl)-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



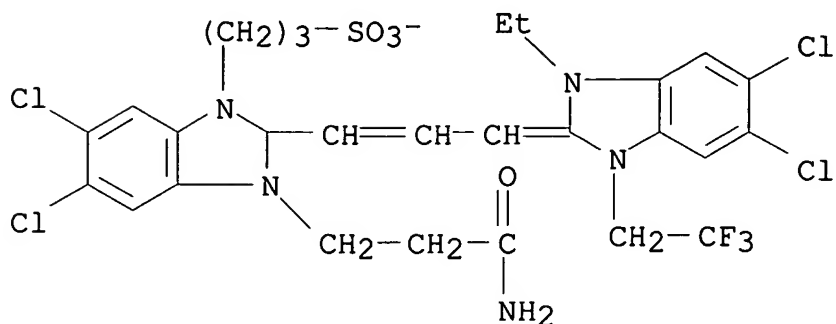
● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 93664-24-5 HCAPLUS

CN 1H-Benzimidazolium, 1-(3-amino-3-oxopropyl)-5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(2,2,2-trifluoroethyl)-2H-

benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt  
(9CI) (CA INDEX NAME)



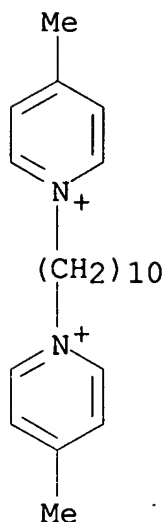
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IT **6275-34-9**

(photog. emulsion containing combination of dye sensitizer and, for increased green spectral sensitivity)

RN 6275-34-9 HCAPLUS

CN Pyridinium, 1,1'-(1,10-decanediyl)bis[4-methyl-, dibromide (9CI)  
(CA INDEX NAME)



●2 Br<sup>-</sup>

IC G03C001-28

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

ST **green sensitivity** photog emulsion; sensitizer dye green emulsion photog

IT **6099-53-2 28272-54-0 33628-03-4**  
**33628-07-8 93054-07-0 93664-18-7**  
**93664-19-8 93664-20-1 93664-21-2**  
**93664-22-3 93664-23-4 93664-24-5**

(photog. emulsion containing combination of dipyridinium compound and, for increased green spectral sensitivity)

IT **6275-34-9** 93664-25-6 93664-26-7 93664-27-8  
 93664-28-9 93664-29-0 93696-29-8

(photog. emulsion containing combination of dye sensitizer and, for increased green spectral sensitivity)

L29 ANSWER 49 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:464127 HCAPLUS

DOCUMENT NUMBER: 97:64127

TITLE: Photographic recording material with variable contrast

INVENTOR(S): Gernert, Herbert; Burger, Theo

USHA SHRESTHA REM 4B28

PATENT ASSIGNEE(S): Agfa-Gevaert A.-G. , Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 35 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 3028167	A1	19820401/	DE 1980-3028167	1980 0725

PRIORITY APPLN. INFO.: DE 1980-3028167

1980  
0725

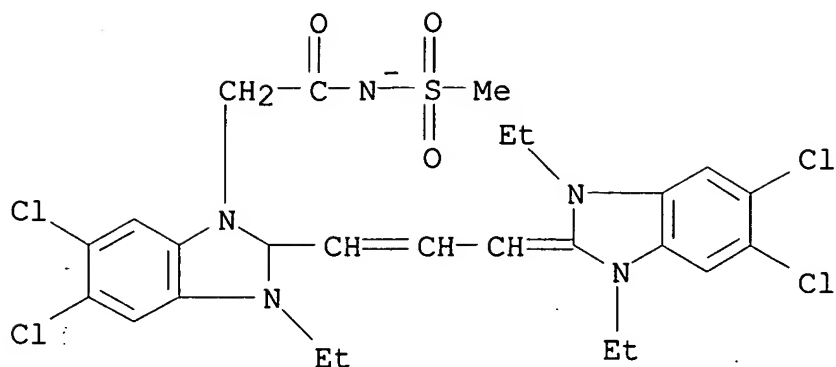
AB A variable contrast photog. material is described which possesses high sensitivity for scanner exposure and shows a sufficiently steep gradation in the blue spectral region for use as a scan film along with a 50-100% flatter gradation in the green spectral region in comparison to the blue exposure. The material consists of a support with 2 emulsion layers, one of which is sensitive to blue and green light and the other which is sensitive to blue light. The exposure factor of the gradation curve for the blue sensitive layer lies in the region of its **green sensitivity** upon exposure of the material with light from 500 to 620 nm at a d. of 1.0-2.0 of the gradation for the **green sensitivity**. The material is especially useful in the production of color sepns. by exposure with a scanner and exposure in a copy apparatus for a  $\gamma$ - $\lambda$ -variable material.

IT 53132-00-6 82526-26-9 82526-27-0  
 82526-28-1 82537-84-6

(photog. sensitizer, for variable contrast films for scanner exposure)

RN 53132-00-6 HCAPLUS

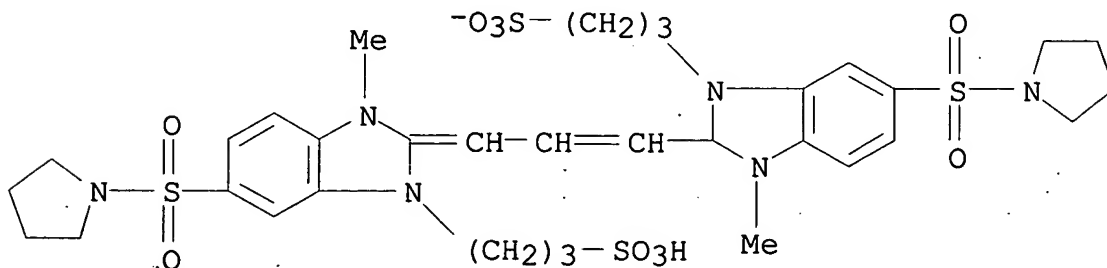
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 82526-26-9 HCAPLUS

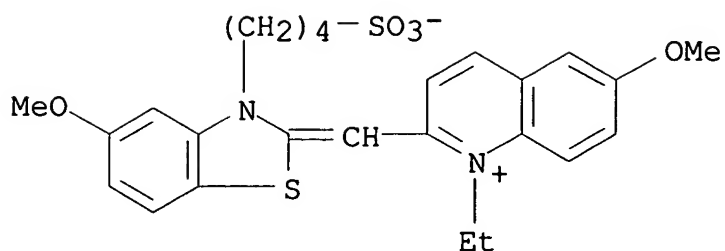
CN 1H-Benzimidazolium, 2-[3-[1,3-dihydro-1-methyl-5-(1-pyrrolidinylsulfonyl)-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-methyl-5-(1-pyrrolidinylsulfonyl)-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

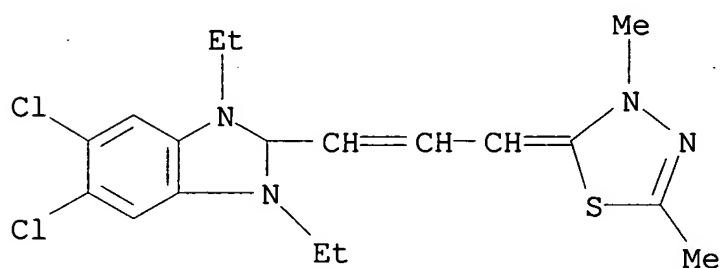
RN 82526-27-0 HCAPLUS

CN Quinolinium, 1-ethyl-6-methoxy-2-[[5-methoxy-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 82526-28-1 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(3,5-dimethyl-1,3,4-thiadiazol-2(3H)-ylidene)-1-propenyl]-1,3-diethyl-, iodide (9CI)  
(CA INDEX NAME)

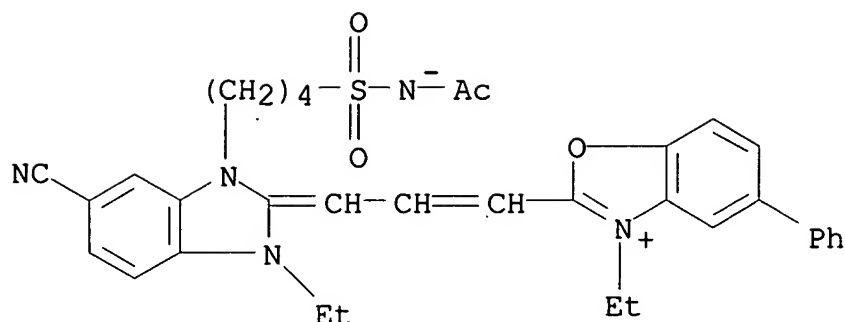


● I<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 82537-84-6 HCAPLUS

CN Benzoxazolium, 2-[3-[3-[4-[(acetylamino)sulfonyl]butyl]-5-cyano-1-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-phenyl-, inner salt (9CI) (CA INDEX NAME)



IC G03C001-46  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT **53132-00-6 82526-26-9 82526-27-0**  
**82526-28-1 82537-84-6**

(photog. sensitizer, for variable contrast films for scanner exposure)

L29 ANSWER 50 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1980:67687 HCAPLUS  
 DOCUMENT NUMBER: 92:67687  
 TITLE: Color photographic material  
 INVENTOR(S): Haylett, Norman Charles  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Ger. Offen., 37 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2902681	A1	19790802	DE 1979-2902681	1979 0124
JP 54118245	A2	19790913	JP 1979-5618	1979 0123
GB 2013356	A	19790808	GB 1979-2477	1979



0124

GB 2013356 B2 19820421  
BE 873704 A1 19790725 BE 1979-193070

1979  
0125

FR 2415826 A1 19790824 FR 1979-1972

1979  
0125

PRIORITY APPLN. INFO.: GB 1978-3109 A

1978  
0126

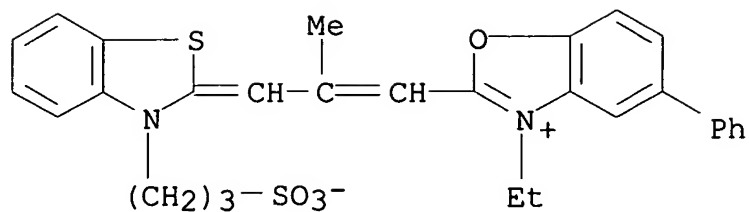
GI For diagram(s), see printed CA Issue.

AB A color film assembly which produces clear, sharp images consists of  $\geq 1$  Ag halide emulsion layer containing a color coupler and  $\geq 1$  Ag halide emulsion layer with  $\geq 1$  developer-inhibitor releasing coupler I (R = alkyl or substituted Ph; Z = number of atoms needed to complete a 5- or 6-membered ring; and R1 = aryl. or a heterocycle) in which the developer-inhibitor-releasing layer forms no image on development and the color-coupler layer forms no Ag image. Thus, a film composed of a support coated with (1) a red-sensitive Ag(Br,I) layer containing dye sensitizers and cyan couplers; (2) a 2nd red-sensitive Ag(Br,I) layer containing dye sensitizers and cyan couplers; (3) an intermediate layer of di-tert-octylhydroquinone and gelatin; (4) a **green-sensitive** Ag(Br,I) layer containing dye sensitizers and magenta couplers; (5) a donor layer of Ag(Br,I) emulsion 3.0 mg/dm<sup>2</sup>, sensitizer II 125 and sensitizer III 125 mg/mol Ag halide, developer-inhibitor releaser coupler IV 4.0, and gelatin 8.0 mg/dm<sup>2</sup>; (6) an intermediate layer; (7) a 2nd **green-sensitive** Ag(Br,I) layer containing dye sensitizers and magenta couplers; (8) an intermediate layer; (9) a yellow colloidal Ag filter layer; (10) a blue-sensitive Ag(Br,I) layer containing a yellow coupler; (11) a blue-sensitive Ag(Br,I) layer containing a yellow coupler; and (12) a gelatin top layer was exposed and developed to give an image with excellent contrast and color saturation

IT **35574-16-4 39981-04-9 39981-05-0**  
**72494-11-2 72494-12-3 72494-13-4**  
(photog. spectral sensitizer, for use in color photog. materials containing development inhibitor-releasing coupler)

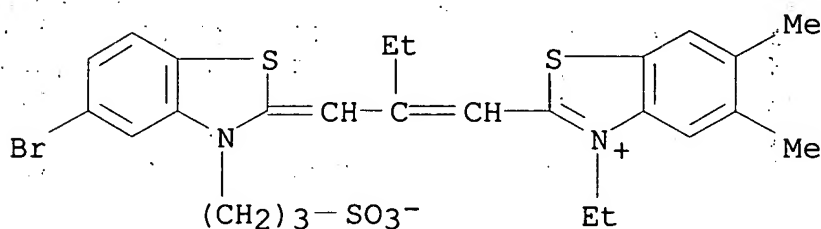
RN 35574-16-4 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[2-methyl-3-[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]-1-propenyl]-5-phenyl-, inner salt (9CI) (CA INDEX NAME)



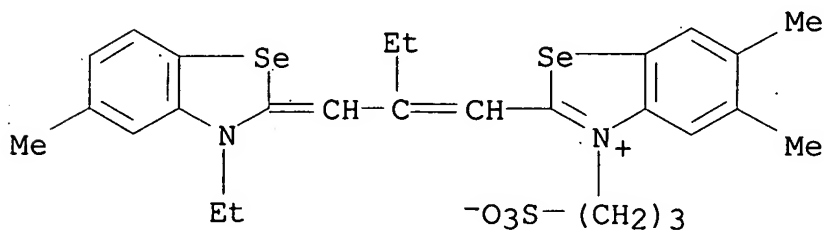
RN 39981-04-9 HCAPLUS

CN Benzothiazolium, 2-[2-[[5-bromo-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-ethyl-5,6-dimethyl-, inner salt (9CI) (CA INDEX NAME)



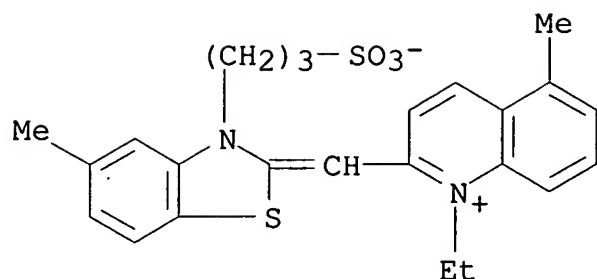
RN 39981-05-0 HCAPLUS

CN Benzoselenazolium, 2-[2-[(3-ethyl-5-methyl-2(3H)-benzoselenazolylidene)methyl]-1-butenyl]-5,6-dimethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



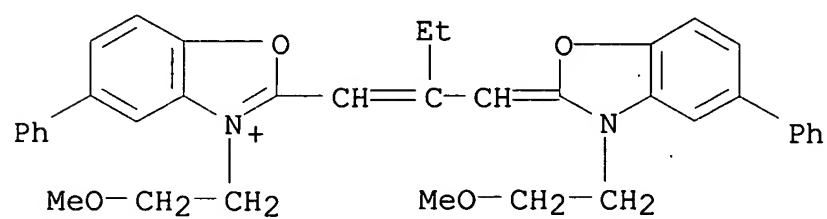
RN 72494-11-2 HCAPLUS

CN Quinolinium, 1-ethyl-5-methyl-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



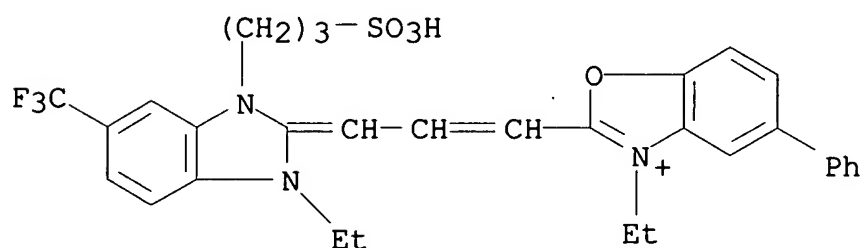
RN 72494-12-3 HCAPLUS

CN Benzoxazolium, 3-(2-methoxyethyl)-2-[2-[[3-(2-methoxyethyl)-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl- (9CI)  
(CA INDEX NAME)



RN 72494-13-4 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

IC G03C007-32

USHA SHRESTHA

REM 4B28

CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)

IT 35574-16-4 39981-04-9 39981-05-0  
72494-11-2 72494-12-3 72494-13-4

(photog. spectral sensitizer, for use in color photog.  
materials containing development inhibitor-releasing coupler)

L29 ANSWER 51 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1980:50056 HCAPLUS

DOCUMENT NUMBER: 92:50056

TITLE: Multilayer color photographic paper

INVENTOR(S): Taguchi, Masahiko; Mogaki, Katsuo; Nakamura,  
Shinichi

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54099434	A2	19790806	JP 1978-5667	1978 0120

PRIORITY APPLN. INFO.:

JP 1978-5667 A  
1978  
0120

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*

AB Multilayer color photog. papers possess reflectivity (of the unexposed area after photog. processing) at 570-660 nm, 480-570 nm, and 420-480 nm wavelength ranges of  $\geq 70\%$ , within  $\pm 5\%$  of the reflectivity in the 570-660 nm range, and within  $+10\%$  of the reflectivity in the 570-660 nm range, resp. The color photog. papers exhibit excellent image clearness. The above requirements

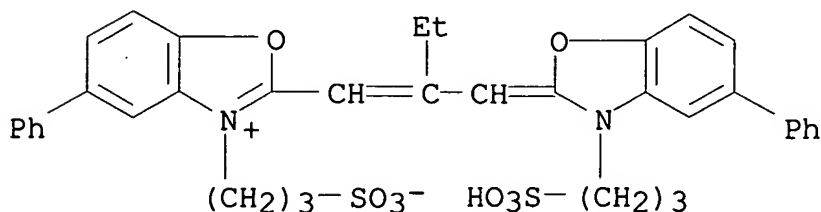
can be achieved easily by selecting proper support and photog. coating compns. especially by properly selecting blue-sensitizing dye and magenta coupler. Thus, a paper support was coated with (1) a polyethylene composition containing a white pigment (anatase and rutile type TiO<sub>2</sub> mixture coated with Al<sub>2</sub>O<sub>3</sub>) and a bluing agent; (2) a blue-sensitive emulsion containing  $\alpha$ -(1-benzyl-2-phenyl-3,5-dioxo-1,2,4-triazolidinyl-4)- $\alpha$ -pivalyl-2-chloro-5-[ $\gamma$ -(2,4-di-tert-amylphenoxy)butyramido]acetanilide (a yellow coupler) and the sensitizing dye I; (3) an intermediate layer; (4) a **green-sensitive** emulsion layer containing the magenta coupler II and the sensitizing dye III; (5) a UV-absorber containing intermediate layer; (6) a red-sensitive layer containing 2,4-dichloro-3-methyl-6-[ $\alpha$ -(2,4-di-tert-amylphenoxy)butyramido]phenol (a cyan coupler), the sensitizer dye IV, and a fluorescent brightener; and (7) a gelatin protective layer. The photog. paper was developed without exposure to give average reflectivities of 83, 77, and 76% for 420-480, 480-570, and 570-660 nm wavelength regions, resp. The photog. paper was then sensitometrically exposed and developed to give relative sensitivity,  $\gamma$ -value, and yellow stain of 260, 3.00, and 0.05, resp.

IT 29133-39-9 51588-85-3 51588-94-4  
51588-96-6 55425-27-9 70679-43-5  
72395-54-1 72395-55-2 72395-56-3  
72395-59-6

(photog. sensitizer)

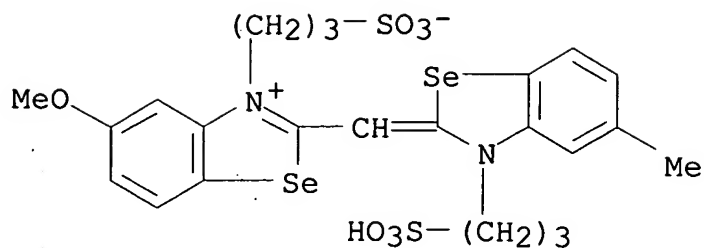
RN 29133-39-9 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI). (CA INDEX NAME)



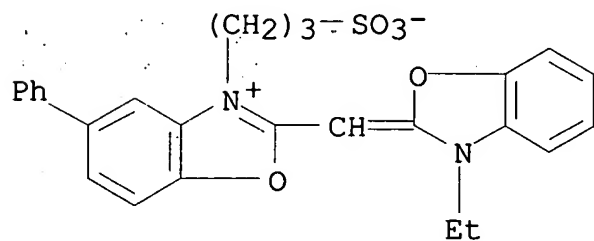
RN 51588-85-3 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



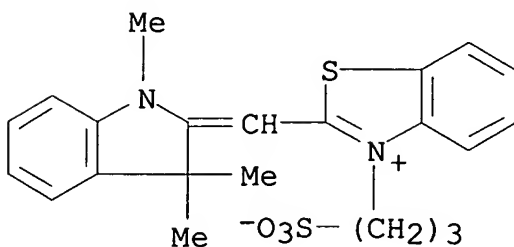
RN 51588-94-4 HCAPLUS

CN Benzoxazolium, 2-[(3-ethyl-2(3H)-benzoxazolylidene)methyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



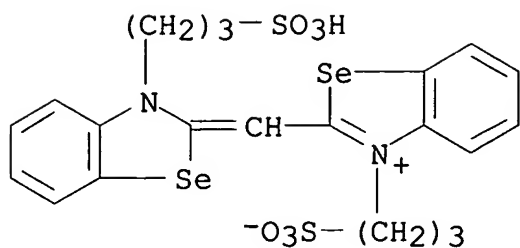
RN 51588-96-6 HCAPLUS

CN Benzothiazolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 55425-27-9 HCAPLUS

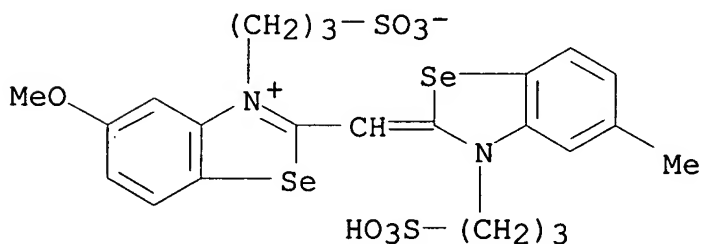
CN Benzoselenazolium, 3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 70679-43-5 HCAPLUS

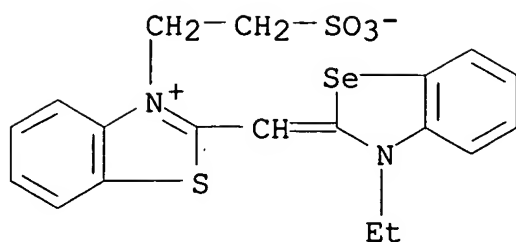
CN Benzoselenazolium, 5-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylylidene)methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

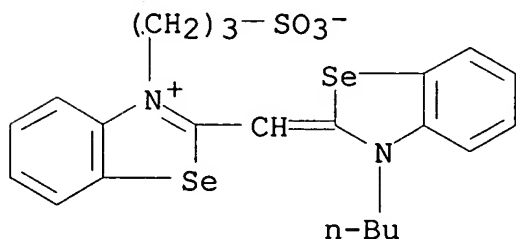
RN 72395-54-1 HCAPLUS

CN Benzothiazolium, 2-[(3-ethyl-2(3H)-benzoselenazolylylidene)methyl]-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



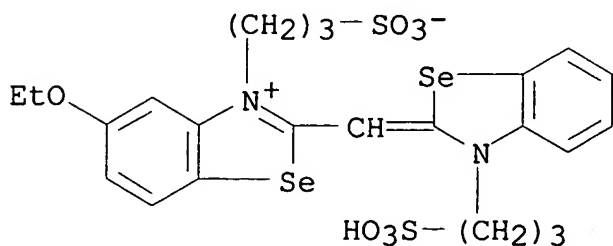
RN 72395-55-2 HCAPLUS

CN Benzoselenazolium, 2-[(3-butyl-2(3H)-benzoselenazolylidene)methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 72395-56-3 HCAPLUS

CN Benzoselenazolium, 5-ethoxy-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

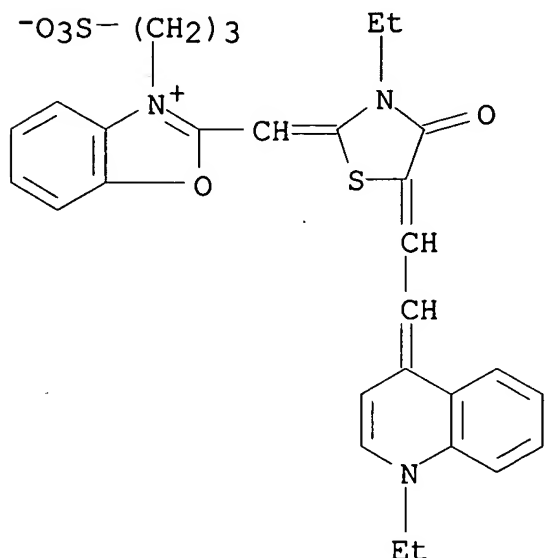
RN 72395-59-6 HCAPLUS

USHA SHRESTHA

REM 4B28



CN Benzoxazolium, 2-[[3-ethyl-5-[(1-ethyl-4(1H)-quinolinylidene)ethylidene]-4-oxo-2-thiazolidinyli-  
dene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC G03C007-20; G03C001-86  
CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)  
IT 27930-83-2 28022-99-3 **29133-39-9 51588-85-3**  
**51588-94-4 51588-96-6 55425-27-9**  
**70679-43-5 72395-54-1 72395-55-2**  
**72395-56-3 72395-58-5 72395-59-6**  
(photog. sensitizer)

L29 ANSWER 52 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1977:609500 HCAPLUS

DOCUMENT NUMBER: 87:209500

TITLE: **Green sensitized** silver  
halide photographic materials  
INVENTOR(S): Horigome, Koichi; Ishikawa, Naooki; Fujimori,  
Noboru; Mine, Kiyomitsu

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

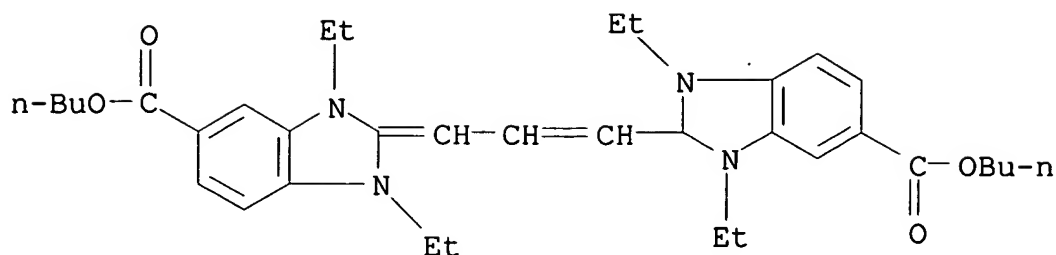
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 52051932	A2	19770426 /	JP 1975-127728	1975 1022
JP 57053935	B4	19821116	JP 1975-127728	A 1975 1022

PRIORITY APPLN. INFO.:

- GI For diagram(s), see printed CA Issue.
- AB Ag halide photog. materials are spectrally sensitized to the green region by using  $\geq 1$  carbocyanine dye I (R = lower alkyl; Z, Z1 = alkylene; R1, R2 = H, halo, lower alkyl, lower alkoxy; M = H, alkali metal, quaternary ammonium) and  $\geq 1$  carbocyanine dye II (R3, R4 = lower alkyl, substituted alkyl; R5, R6 = lower alkyl, hydroxyalkyl, sulfoalkyl; R7 = C $\geq 4$  alkyl, aryl, substituted aryl, R8, R9 = H, halogen atom, sulfamoyl, alkylamido, alkoxy-carbonyl, CN, CF<sub>3</sub>; X<sup>-</sup> anion, n = 0.1). Optionally  $\geq 1$  compound of a general structure III (R10 = H, lower alkyl, alkoxy; R11 = H, halogen atom, lower alkyl, alkoxy; Z2 = S, Se; R12, R13 = lower alkyl, hydroxyalkyl, carboxyalkyl, sulfoalkyl; X<sup>-</sup> = anion; m = 0, 1) may also be used in combination with I and II. The photog. materials exhibit excellent **green sensitivity**. Thus, a AgBr0.97I0.03 photog. material containing IV 50 and V 30 mg/mol Ag halide had relative sensitivity, fog, and maximum sensitivity wavelength of 160, 0.03, and 575 nm, resp., vs. 160, 0.04, and 550 nm, resp., for a control with IV 100 mg/mol Ag halide and without V.
- IT 31994-35-1 34141-88-3 34141-91-8  
60860-63-1 64722-50-5 64722-51-6  
64722-52-7 64722-53-8 64722-54-9  
64722-55-0 64722-56-1 64722-57-2  
64722-58-3 64722-59-4 64722-60-7  
64722-61-8 64722-62-9 64722-63-0  
(photog. spectral sensitizer combinations containing, for green region)
- RN 31994-35-1 HCAPLUS
- CN 1H-Benzimidazolium, 5-(butoxycarbonyl)-2-[3-[5-(butoxycarbonyl)-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-1,3-diethyl-, iodide (9CI) (CA INDEX NAME)

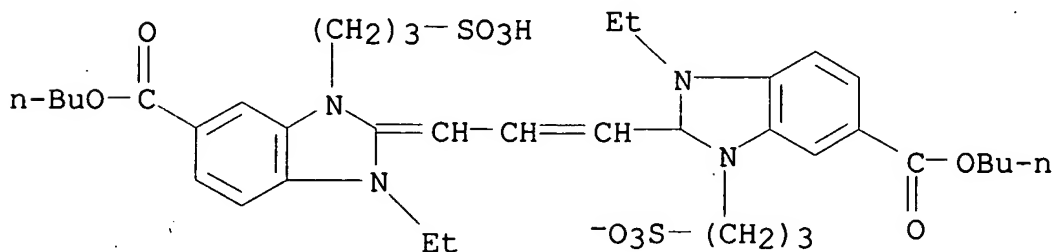


● I<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 34141-88-3 HCAPLUS

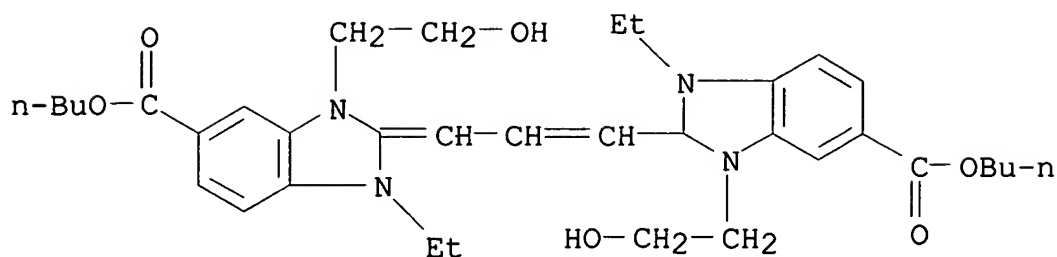
CN 1H-Benzimidazolium, 5-(butoxycarbonyl)-2-[3-[5-(butoxycarbonyl)-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 34141-91-8 HCAPLUS

CN 1H-Benzimidazolium, 5-(butoxycarbonyl)-2-[3-[5-(butoxycarbonyl)-1-ethyl-1,3-dihydro-3-(2-hydroxyethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(2-hydroxyethyl)-, iodide (9CI) (CA INDEX NAME)

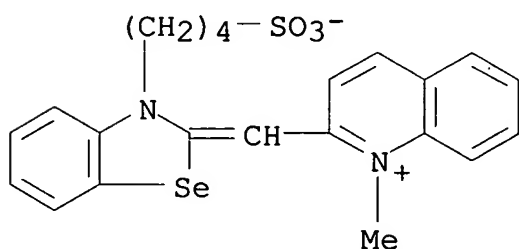


● I<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

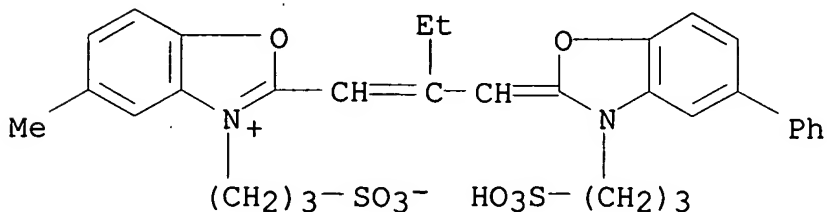
RN 60860-63-1 HCAPLUS

CN Quinolinium, 1-methyl-2-[[3-(4-sulfobutyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



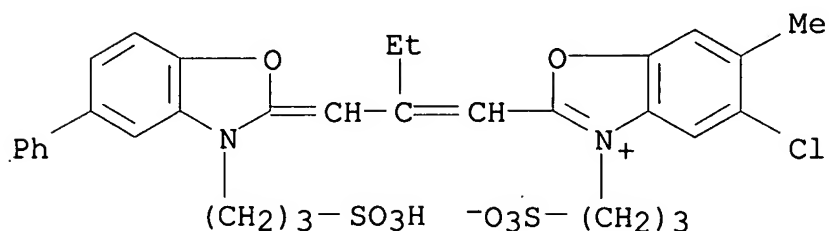
RN 64722-50-5 HCAPLUS

CN Benzoxazolium, 5-methyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 64722-51-6 HCAPLUS

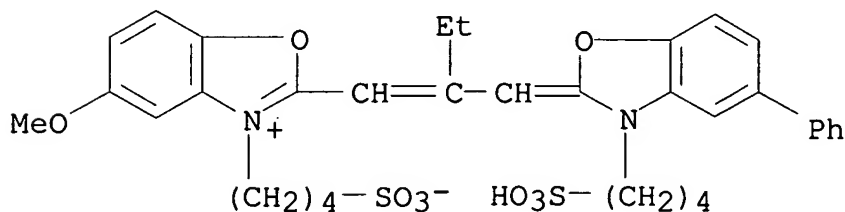
CN Benzoxazolium, 5-chloro-6-methyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 64722-52-7 HCAPLUS

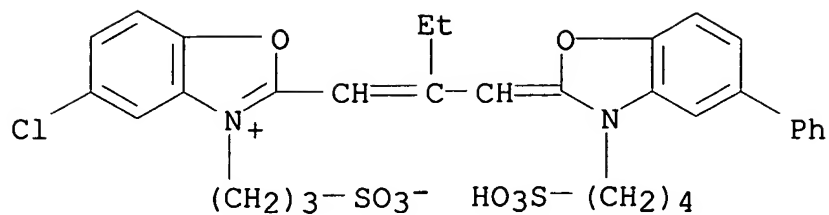
CN Benzoxazolium, 5-methoxy-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)



● K

RN 64722-53-8 HCAPLUS

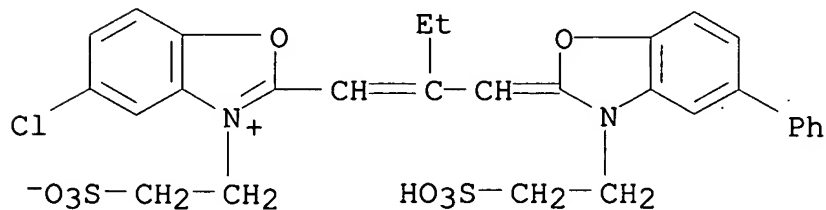
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolyliidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 64722-54-9 HCAPLUS

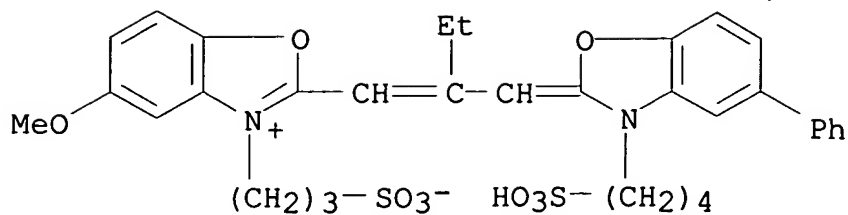
CN Benzoxazolium, 5-chloro-2-[2-[[5-phenyl-3-(2-sulfoethyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 64722-55-0 HCAPLUS

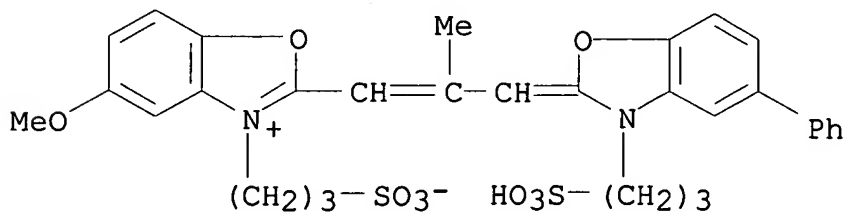
CN Benzoxazolium, 5-methoxy-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 64722-56-1 HCAPLUS

CN Benzoxazolium, 5-methoxy-2-[2-methyl-3-[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

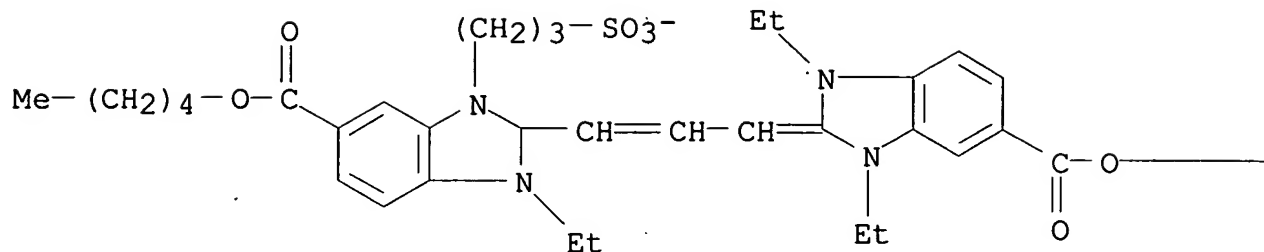


● Na

RN 64722-57-2 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[1,3-diethyl-1,3-dihydro-5-[(pentyloxy)carbonyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-5-[(pentyloxy)carbonyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



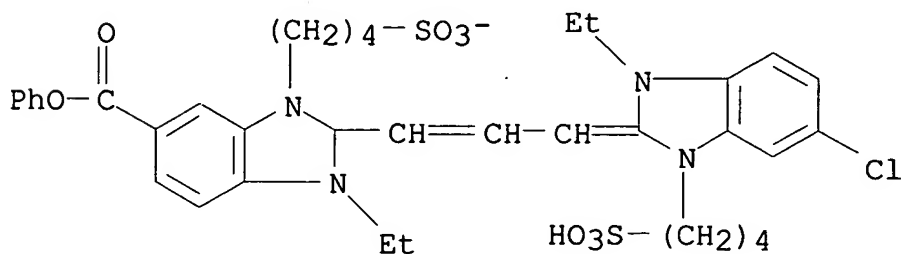
PAGE 1-B

— (CH<sub>2</sub>)<sub>4</sub>—Me

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 64722-58-3 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(4-sulfoethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-5-(phenoxy-carbonyl)-3-(4-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 64722-59-4 HCAPLUS

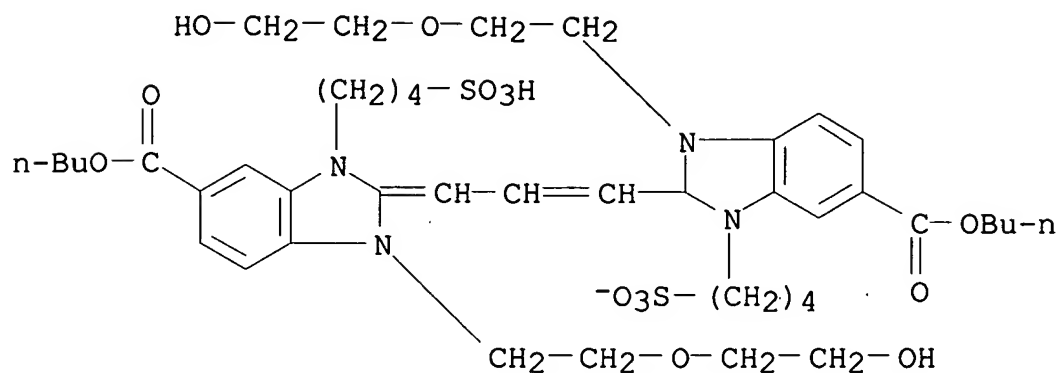
CN 1H-Benzimidazolium, 5-(butoxycarbonyl)-2-[3-[5-(butoxycarbonyl)-1,3-dihydro-1-[2-(2-hydroxyethoxy)ethyl]-3-(4-sulfoethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-[2-(2-hydroxyethoxy)ethyl]-3-

USHA SHRESTHA

REM 4B28



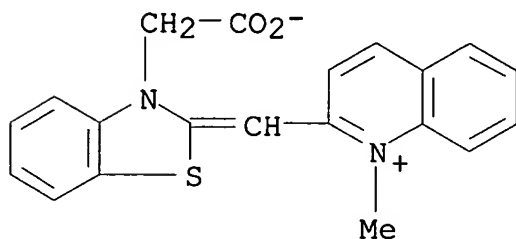
(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

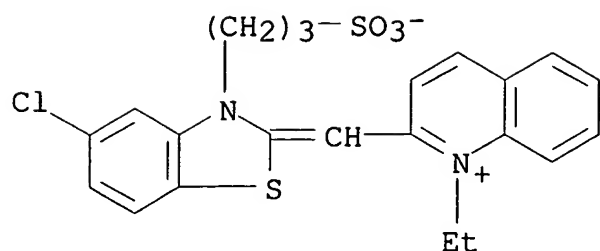
RN 64722-60-7 HCAPLUS

CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-methyl-, inner salt (9CI) (CA INDEX NAME)



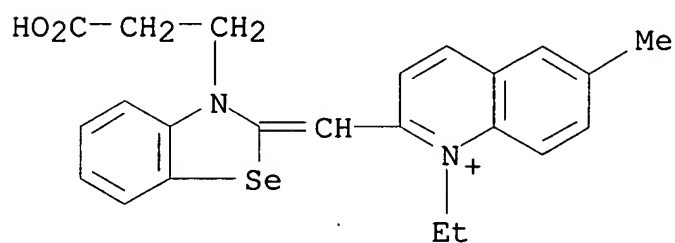
RN 64722-61-8 HCAPLUS

CN Quinolinium, 2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 64722-62-9 HCAPLUS

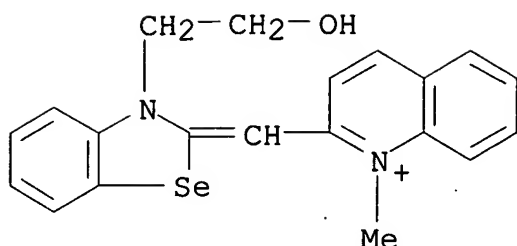
CN Quinolinium, 2-[[3-(2-carboxyethyl)-2(3H)-benzoselenazolylidene]methyl]-1-ethyl-6-methyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 64722-63-0 HCAPLUS

CN Quinolinium, 2-[[3-(2-hydroxyethyl)-2(3H)-benzoselenazolylidene]methyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

IC G03C001-28  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)  
 ST **green sensitive** photog emulsion; silver halide photog material; sensitizer dye color photog  
 IT 31994-35-1 34141-88-3 34141-91-8  
 60860-63-1 64722-50-5 64722-51-6  
 64722-52-7 64722-53-8 64722-54-9  
 64722-55-0 64722-56-1 64722-57-2  
 64722-58-3 64722-59-4 64722-60-7  
 64722-61-8 64722-62-9 64722-63-0  
 (photog. spectral sensitizer combinations containing, for green region)

L29 ANSWER 53 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1977:476357 HCAPLUS  
 DOCUMENT NUMBER: 87:76357  
 TITLE: Spectrally sensitized, photographic silver halide emulsions  
 INVENTOR(S): Matsuyama, Junichi; Hinata, Masanao; Sato, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Ger. Offen., 45 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA	REM 4B28			
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DE 2622315

A1

19761202

DE 1976-2622315

1976  
0519

JP 51135528

A2

19761124

JP 1975-59479

1975  
0519

JP 56047545

B4

19811110

US 4040839

A

19770809/

US 1976-687819

1976  
0519

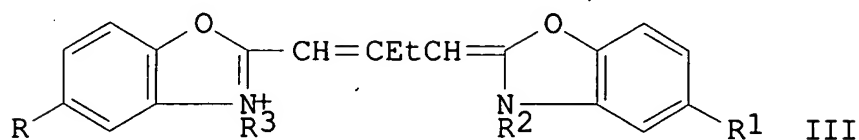
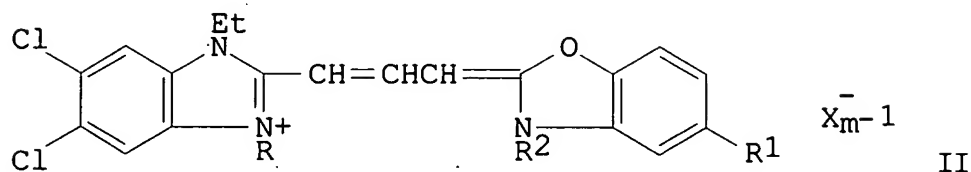
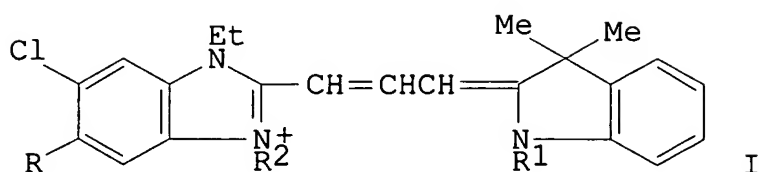
PRIORITY APPLN. INFO.:

JP 1975-59479

A

1975  
0519

GI



AB The **green-sensitivity** of direct-pos. emulsions is increased by using a supersensitizing combination of  $\geq 1$  cyanine dye I (R = Cl, 4-morpholinosulfonyl; R1 = Me, (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H; R2 = (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup>, CH<sub>2</sub>CO<sub>2</sub><sup>-</sup>) and  $\geq 1$  cyanine dye II (R = (CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H, (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup>, (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub><sup>-</sup>; R1 = H, Me, Ph; R2 = Et, (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>Na; m = 1,2) or III (R,R1 = Me, Ph, Cl; R2 = (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H,

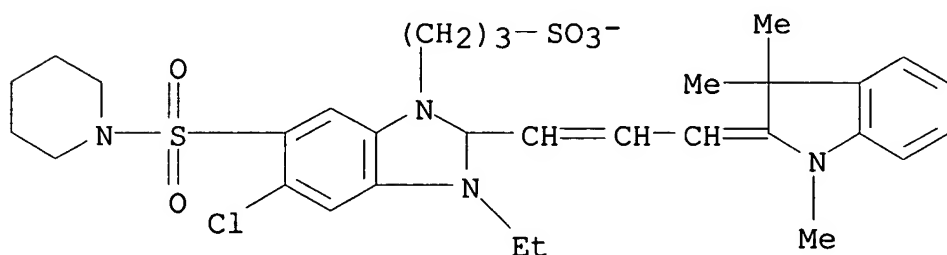
(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>Na, (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>Na; R<sub>3</sub> = (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>-, (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>-). Thus, a gelatin-Ag(Br,Cl,I) emulsion containing I (R = Cl; R<sub>1</sub> = Me; R<sub>2</sub> = CH<sub>2</sub>CO-) (IV) at 1 + 10<sup>-4</sup> mol/mol Ag halide and II (R = (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>-; R<sub>1</sub> = Ph; R<sub>2</sub> = (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>Na; m = 1) (V) at 2 + 10<sup>-4</sup> mol/mol Ag halide was coated on a support, dried, sensitometrically exposed, and developed to give a relative reversal sensitivity, a D<sub>max</sub>, and D<sub>min</sub> of 182, 2.4 and 0.07, resp., vs. 100, 2.3, and 0.09, resp., for a control containing IV alone and 79, 2.3, and 0.08, resp., for a control containing V alone.

IT 28279-19-8 33628-03-4 41528-09-0  
 41664-71-5 63544-47-8 63544-48-9  
 63544-49-0 63544-50-3 63544-51-4  
 63544-52-5

(photog. supersensitizer combinations containing carbocyanine dyes and)

RN 28279-19-8 HCAPLUS

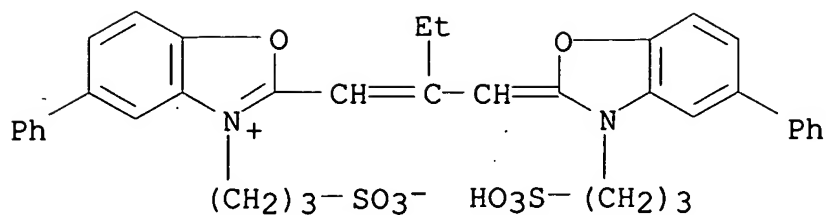
CN 1H-Benzimidazolium, 6-chloro-2-[3-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-5-(1-piperidinylsulfonyl)-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 33628-03-4 HCAPLUS

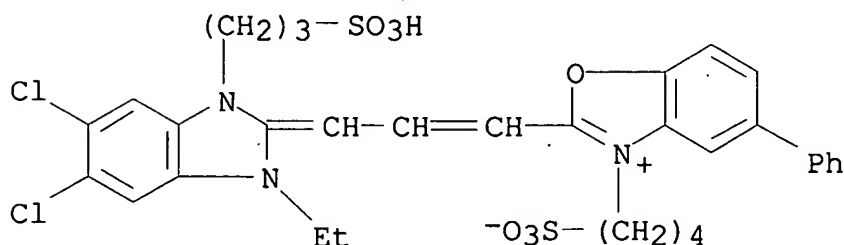
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 41528-09-0 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

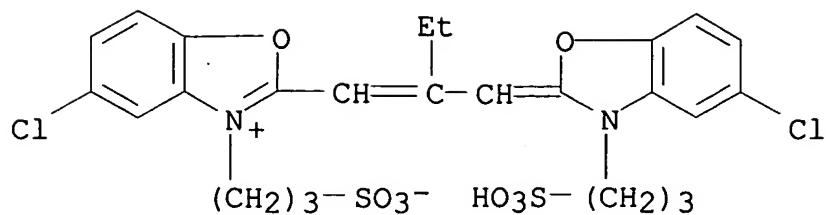
RN 41664-71-5 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

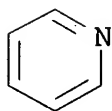
CMF C25 H26 Cl2 N2 O8 S2



CM 2

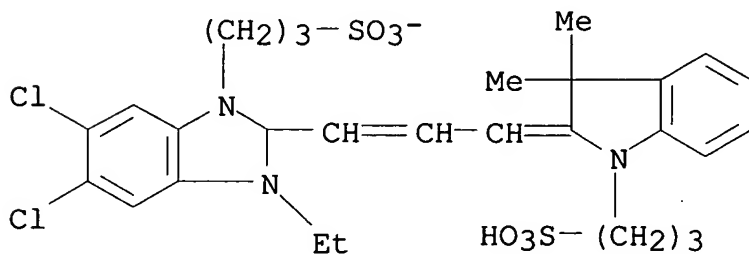
CRN 110-86-1

CMF C5 H5 N



RN 63544-47-8 HCAPLUS

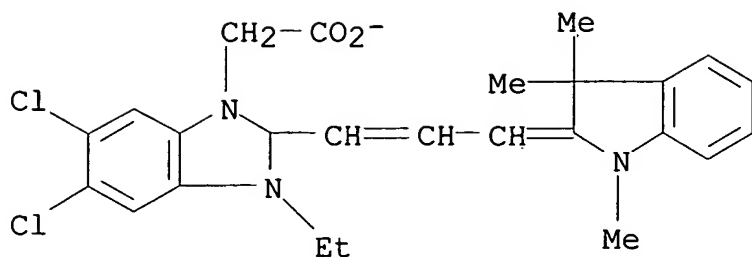
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 63544-48-9 HCAPLUS

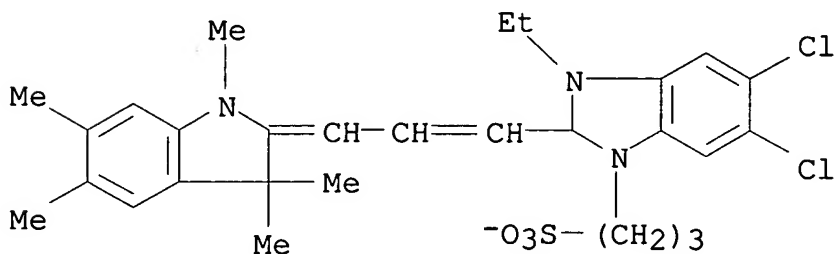
CN 1H-Benzimidazolium, 1-(carboxymethyl)-5,6-dichloro-2-[3-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 63544-49-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(1,3-dihydro-1,3,3,5,6-pentamethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

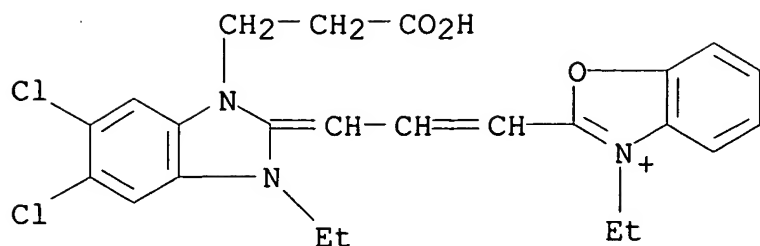


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 63544-50-3 HCAPLUS

CN Benzoxazolium, 2-[3-[1-(2-carboxyethyl)-5,6-dichloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)

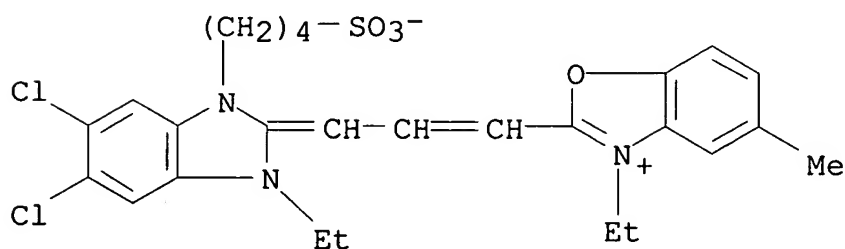




● I<sup>-</sup>

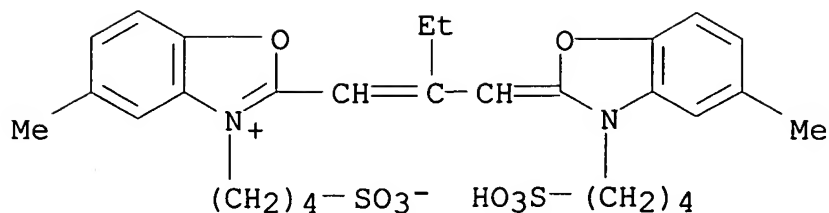
RN 63544-51-4 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methyl-, inner salt (9CI) (CA INDEX NAME)



RN 63544-52-5 HCAPLUS

CN Benzoxazolium, 5-methyl-2-[2-[[5-methyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IC G03C001-28  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic Processes**)  
 IT 28279-19-8 33628-03-4 41528-09-0  
 41664-71-5 63544-47-8 63544-48-9  
 63544-49-0 63544-50-3 63544-51-4  
 63544-52-5  
 (photog. supersensitizer combinations containing carbocyanine dyes  
 and)

L29 ANSWER 54 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1977:431916 HCAPLUS  
 DOCUMENT NUMBER: 87:31916  
 TITLE: Light-sensitive color photographic silver  
 halide material  
 INVENTOR(S): Koitabashi, Takeo; Fujimori, Noboru; Itoh,  
 Shigemasa  
 PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan  
 SOURCE: Ger. Offen., 35 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2613377	A1	19761007	DE 1976-2613377	1976 0329

USHA SHRESTHA REM 4B28

DE 2613377  
JP 51126140

C2 19821125  
A2 19761104 JP 1975-38426

1975  
0329

JP 59009900  
US 4147547

B4 19840306  
A 19790403 / US 1978-868461

1978  
0110

PRIORITY APPLN. INFO.:

JP 1975-38426

A

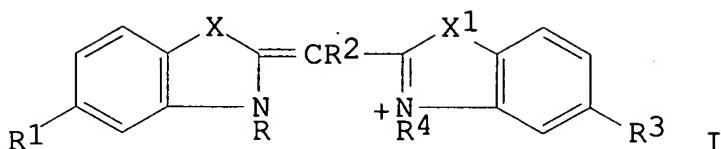
1975  
0329

US 1976-670568

A1

1976  
0325

GI



- AB The addition of the cyanine dyes I (R=Me, Et, C<sub>2</sub>H<sub>4</sub>OH, (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H; R<sub>1</sub>=H, Me, Ph; R<sub>2</sub>=H, Me; R<sub>3</sub>=H, MeO, Ph; R<sub>4</sub>=(CH<sub>2</sub>)<sub>2</sub>SO<sub>3</sub><sup>-</sup>, (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup>, (CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>SO<sub>3</sub><sup>-</sup>; X=S, Se, O, CMe<sub>2</sub>; X<sub>1</sub>=S, Se, O) at .apprx.0.3 g/mol Ag halide to the red-sensitive and **green-sensitive** emulsion layers of a color photog. material hinders fog formation during fast and high-temperature development without decreasing the sensitivity or photog. characteristics of the material. Thus, a cellulose acetate film support with an antihalation layer was coated with a red-sensitive emulsion containing a cyanine dye sensitizer, a cyan coupler, and I (R=(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H; R<sub>1</sub>=H; R<sub>2</sub>=Me; R<sub>3</sub>=MeO; R<sub>4</sub>=(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub><sup>-</sup>; X, X<sub>1</sub>=Se) (II) 0.2 g/mol Ag halide, a **green-sensitive** emulsion layer containing a cyanine dye sensitizer, a magenta coupler, and II 0.1 g/mol Ag halide, a yellow filter layer, and a blue-sensitive emulsion layer was sensitometrically exposed and processed to give a D<sub>max</sub> and sensitivity for the red-sensitive layer of 3.15 and 98, resp., and a D<sub>max</sub> and sensitivity for the **green-sensitive** layer of 2.63 and 96, resp., vs. 2.65 and 100,

resp., and 2.63 and 100, resp., for a II-free control.

IT 51588-83-1 51588-84-2 51588-85-3

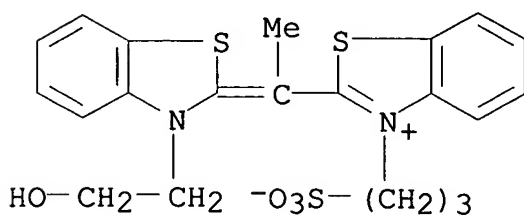
51588-87-5 51588-95-5 51588-96-6

60507-44-0 63226-42-6

(photog. fog inhibitor, for color films processable at high temps.)

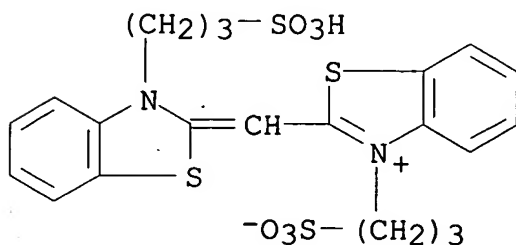
RN 51588-83-1 HCAPLUS

CN Benzothiazolium, 2-[1-[3-(2-hydroxyethyl)-2(3H)-benzothiazolylidene]ethyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



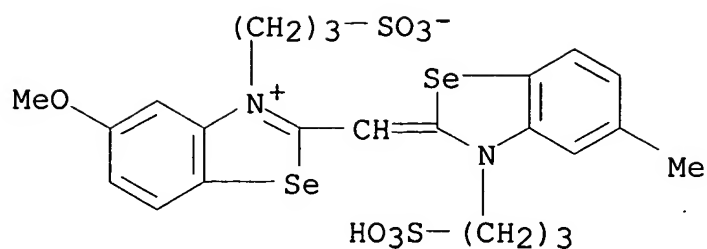
RN 51588-84-2 HCAPLUS

CN Benzothiazolium, 3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



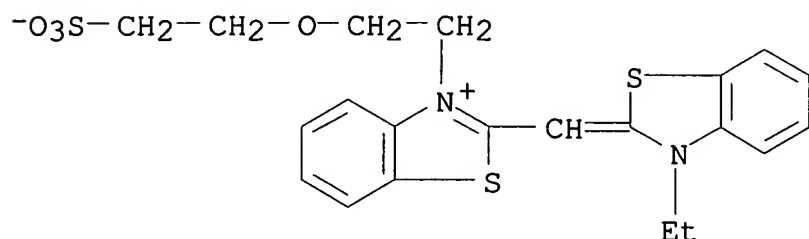
RN 51588-85-3 HCAPLUS

CN Benzoselenazolium, 5-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



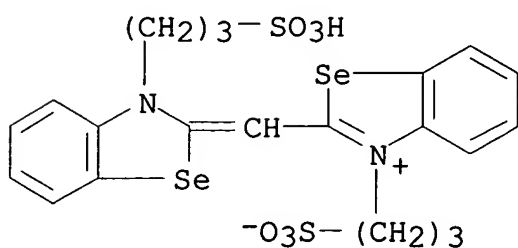
RN 51588-87-5 HCAPLUS

CN Benzothiazolium, 2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-3-[2-(2-sulfoethoxy)ethyl]-, inner salt (9CI) (CA INDEX NAME)



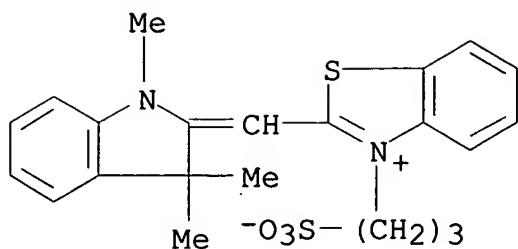
RN 51588-95-5 HCAPLUS

CN Benzoselenazolium, 3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



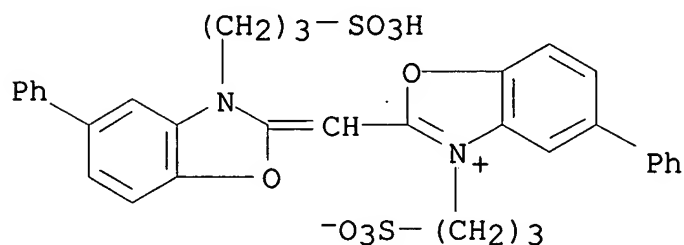
RN 51588-96-6 HCAPLUS

CN Benzothiazolium, 2-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



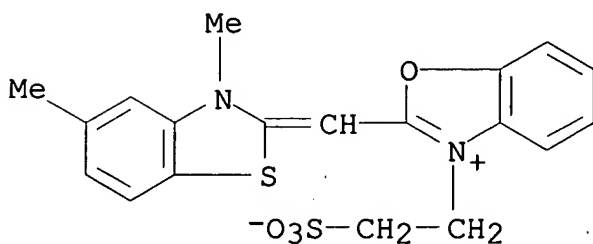
RN 60507-44-0 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



RN 63226-42-6 HCAPLUS

CN Benzoxazolium, 2-[(3,5-dimethyl-2(3H)-benzothiazolylidene)methyl]-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



IC G03C007-26

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)

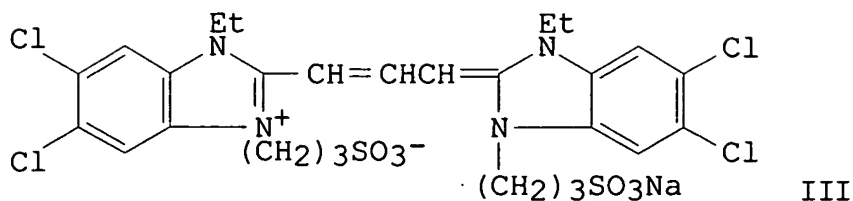
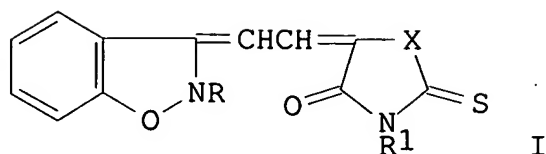
IT 51588-83-1 51588-84-2 51588-85-3  
51588-87-5 51588-95-5 51588-96-6  
60507-44-0 63226-42-6

(photog. fog inhibitor, for color films processable at high temps.)

L29 ANSWER 55 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1977:36313 HCAPLUS  
 DOCUMENT NUMBER: 86:36313  
 TITLE: Spectrally sensitized photographic silver halide emulsions  
 INVENTOR(S): Hinata, Masanao; Takei, Haruo; Sato, Akira; Ogawa, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Ger. Offen., 77 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2547533	A1	19760506	DE 1975-2547533	1975 1023
JP 51048330	A2	19760426	JP 1974-122679	1974 1023
JP 55015015	B4	19800421		
GB 1491633	A	19771109	GB 1975-43450	1975 1022
US 4047964	A	19770913	US 1975-625356	1975 1023
PRIORITY APPLN. INFO.:			JP 1974-122679	A 1974 1023

GI



AB Supersensitizing combinations composed of a cyanine dye containing a benzisoxazole ring I (R=(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>Na, (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub>Na, (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H.C<sub>5</sub>H<sub>5</sub>N; R<sub>1</sub> = Et, Pr, Ph, CH<sub>2</sub>CH:CH<sub>2</sub>; X = O, NMe, NEt, N(CH<sub>2</sub>)<sub>2</sub>OH, N(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>OH) and a cyanine or merocyanine dye not containing a benzisoxazole ring are described which give both improved red and **green sensitivity** in Ag halide materials. The Ag halide materials containing these dye combinations are especially useful for radiog., lithog., and microphotog. Thus,

to 1 kg of a gelatin-Ag(Cl,Br,I) (AgBr 16.5 mole%; AgI 0.3 mole%) emulsion were added 1% aqueous 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene 20, 1% aqueous Na 2-hydroxy-4,6-dichlorotriazine 10, 1% aqueous Na dodecylbenzenesulfonate 10 ml, a MeOH solution of 32 + 10<sup>-5</sup> mole I (R = (CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H.C<sub>5</sub>H<sub>5</sub>N; R<sub>1</sub> = Et; X = NEt)(II), and a MeOH solution of 8 + 10<sup>-5</sup> mole III. This emulsion was then coated on a cellulose acetate support to give a dry thickness of 5μ, exposed using a step wedge and red, green, and blue filters, and developed to give a green filter sensitivity of 328, a red filter sensitivity of 175, and a fog of 0.05 vs. 264, 161, and 0.04, resp., for a III-free control and 264, 103, and 0.05, resp., for a II-free control.

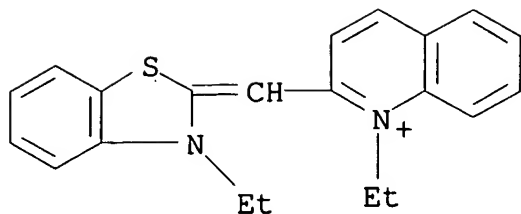
IT 16025-99-3 16704-72-6 18360-25-3  
23216-66-2 23216-67-3 28272-54-0  
30457-66-0 34935-36-9 42905-46-4  
52685-85-5 61369-94-6

(photog. supersensitizer combinations containing)

RN 16025-99-3 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-ethyl-2(3H)-benzothiazolyldiene)methyl]-, iodide (9CI) (CA INDEX NAME)

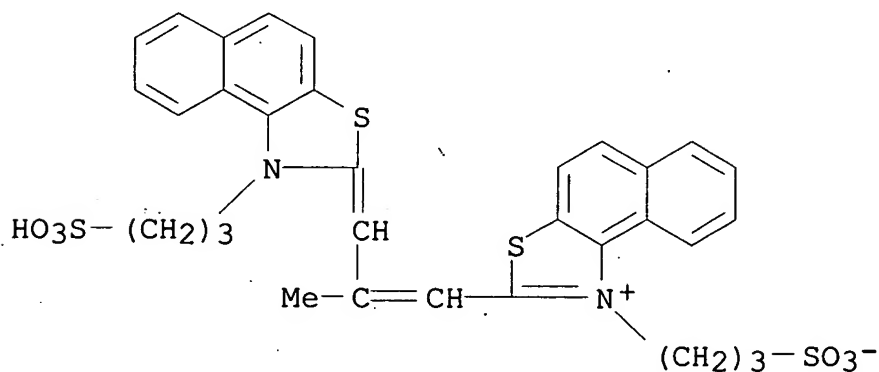




● I<sup>-</sup>

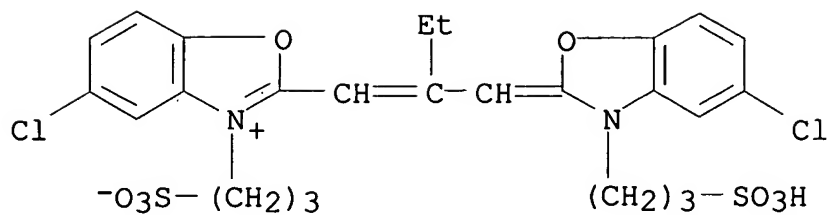
RN 16704-72-6 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[2-methyl-3-[3-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 18360-25-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

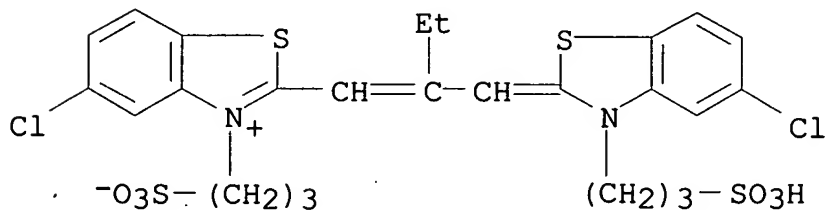
RN 23216-66-2 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 23568-98-1

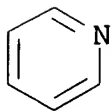
CMF C25 H26 Cl2 N2 O6 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



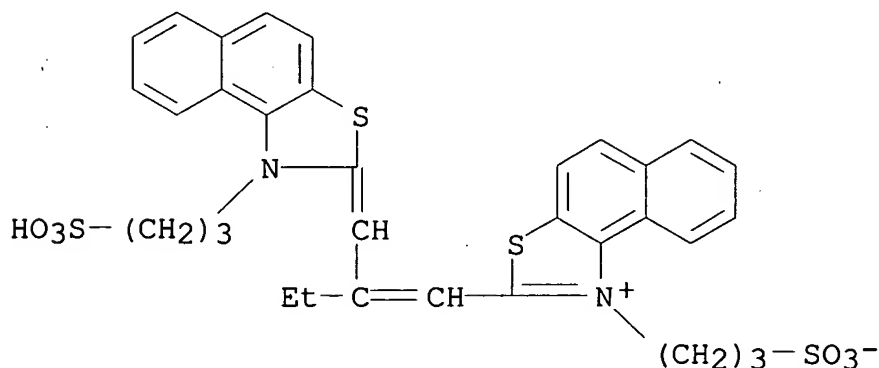
RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 4622-66-6

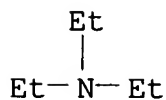
CMF C33 H32 N2 O6 S4



CM 2

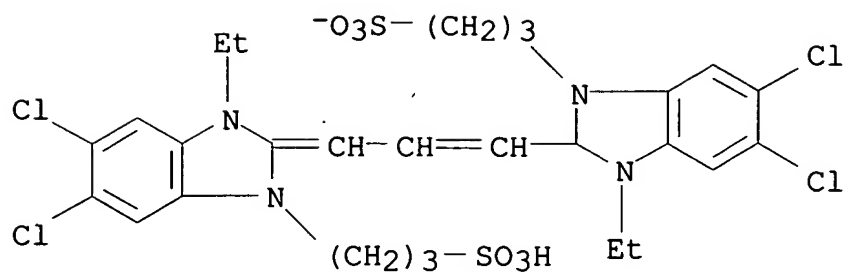
CRN 121-44-8

CMF C6 H15 N



RN 28272-54-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

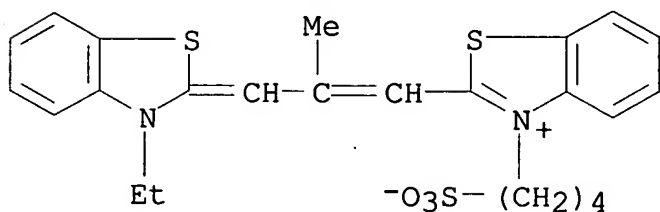


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

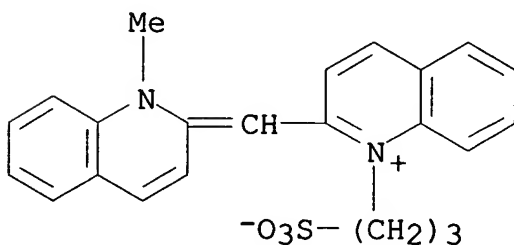
RN 30457-66-0 HCAPLUS

CN Benzothiazolium, 2-[3-(3-ethyl-2(3H)-benzothiazolyldiene)-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 34935-36-9 HCAPLUS

CN Quinolinium, 2-[(1-methyl-2(1H)-quinolinyldiene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 42905-46-4 HCAPLUS

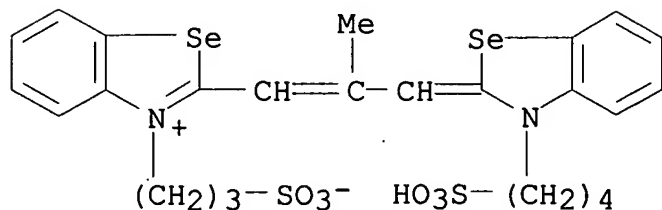
CN Benzoselenazolium, 2-[2-methyl-3-[3-(4-sulfobutyl)-2(3H)-benzoselenazolylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt,

compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 48234-32-8

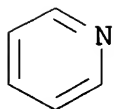
CMF C25 H28 N2 O6 S2 Se2



CM 2

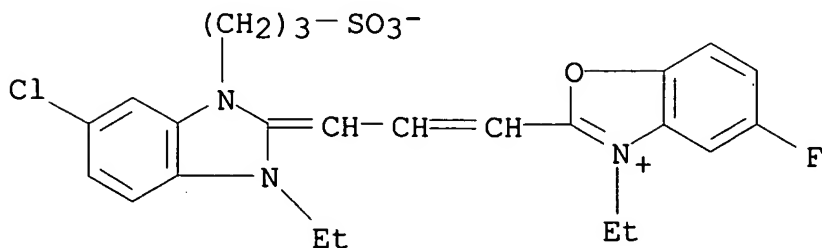
CRN 110-86-1

CMF C5 H5 N



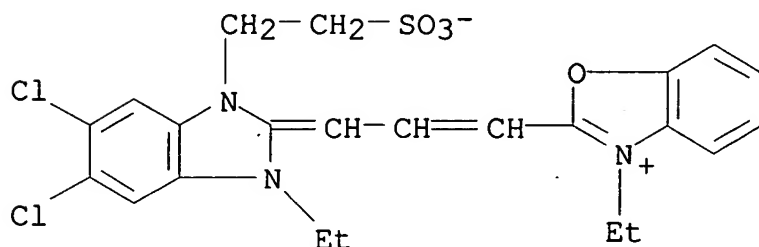
RN 52685-85-5 HCAPLUS

CN Benzoxazolium, 2-[[5-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-fluoro-, inner salt (9CI) (CA INDEX NAME)



RN 61369-94-6 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(2-sulfoethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



IC G03C001-28  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic Processes**)  
 IT 16025-99-3 16704-72-6 18056-77-4  
 18360-25-3 23216-66-2 23216-67-3  
 28272-54-0 30457-66-0 34935-36-9  
 42905-46-4 48221-82-5 52685-85-5 55036-64-1  
 56395-54-1 61369-94-6  
 (photog. supersensitizer combinations containing)

L29 ANSWER 56 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1976:514747 HCAPLUS  
 DOCUMENT NUMBER: 85:114747  
 TITLE: Spectrally sensitized silver halide photographic emulsion  
 INVENTOR(S): Shiba, Keisuke; Sato, Akira; Ogawa, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: U.S., 15 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3947275	A	19760330	US 1973-417841	1973 1121
PRIORITY APPLN. INFO.:			US 1971-139331	A2

USHA SHRESTHA REM 4B28

1971  
0503

GI For diagram(s), see printed CA Issue.

AB A Ag halide photog. emulsion is spectrally sensitized by the use of a supersensitizing dye mixture of I (R1, R2 = H, Ph, halo, CO2H, alkoxy carbonyl, alkyl, alkoxy, OH, CF3, CN; R3 = H, alkyl, R2 may combine with R1 or R3 to form a benzene nucleus; R4, R6, R7 = C1-6 alkyl or alkenyl,  $\geq 1$  of them is sulfoalkyl; R5 = H, alkylene when combining with R7; Z1 = atoms required to form a benzimidazole nucleus) with II. (R8-11 = C1-6 alkyl,  $\geq 1$  of them is alkyl substituted with SO3- or CO2H; Z2, Z3 = atoms required to form a benzimidazole nucleus; X- = acid anion; n = 1-2) over the range of 500-570 nm while holding the maximum sensitizing wavelength over the range of 540-570 nm (within the green region). The photog. emulsion sensitized by the I-II mixture, also produces less stain due to residual dyes remaining after development, than the conventionally supersensitized photog. emulsions. Thus, the sensitizing dyes III 10-3 and IV 5 + 10-4 mole were added to a Ag(Br,I) (I 4 mole %) emulsion 1 kg with agitation. The emulsion was allowed to stand at 40° for 15 min and, after the addition of a hardener and a coating aid, coated on a film support as a 7- $\mu$  layer to give a **green-sensitive** photog. material. The material was then exposed through a wedge to yellow light, and developed to show a relative **green sensitivity** of 120 vs. 16 and 100, resp. for controls using III and IV alone, resp.

IT 29708-48-3 36505-99-4 36506-01-1

(photog. supersensitizers from benzimidazolooxacarbocyanine dyes and)

RN 29708-48-3 HCAPLUS

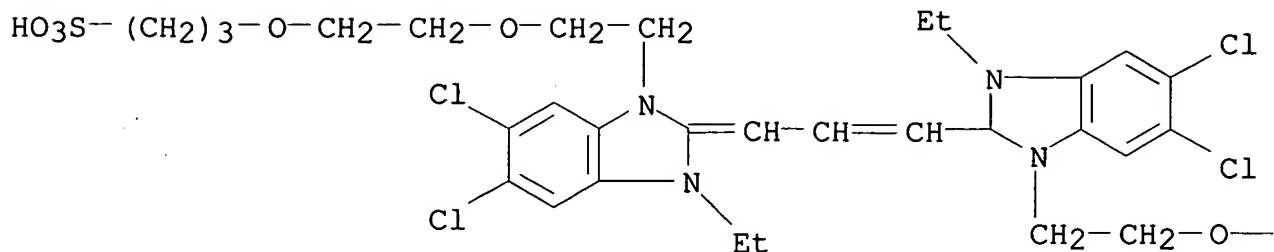
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

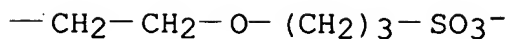
CRN 16242-93-6

CMF C35 H46 C14 N4 O10 S2

PAGE 1-A



PAGE 1-B

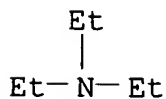


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 121-44-8

CMF C6 H15 N



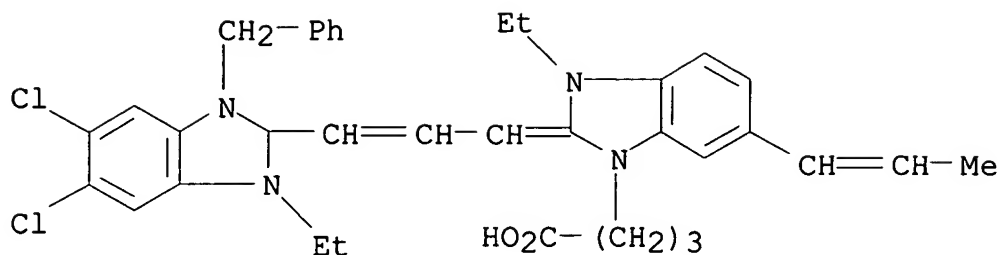
RN 36505-99-4 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[3-(3-carboxypropyl)-1-ethyl-1,3-dihydro-5-(1-propenyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5,6-dichloro-1-ethyl-3-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

USHA SHRESTHA

REM 4B28



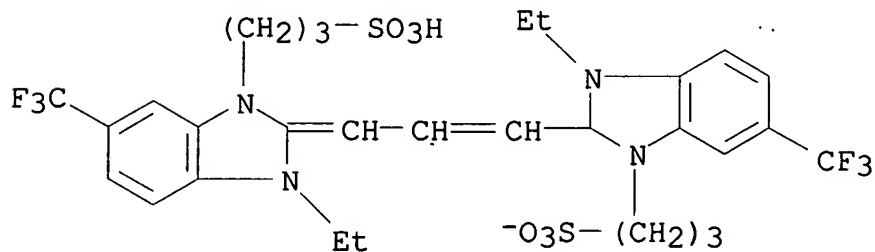


● Br<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 36506-01-1 HCAPLUS

CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IT 36505-89-2 36505-90-5 36505-91-6

36505-92-7 36505-93-8 36505-94-9

36505-95-0 36505-96-1 36505-97-2

36505-98-3 36536-15-9 60379-54-6

(photog. supersensitizers from imidazolocarboaniline dyes and)

RN 36505-89-2 HCAPLUS

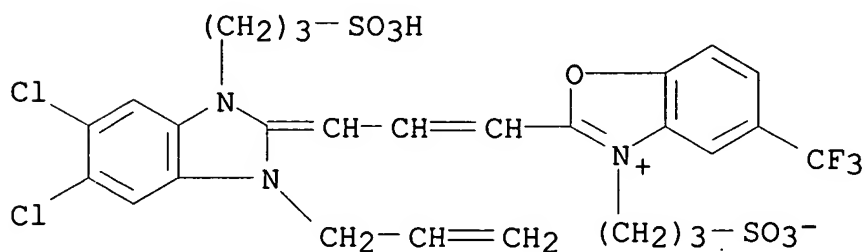
CN Benzoxazolium, 2-[3-[5,6-dichloro-1,3-dihydro-1-(2-propenyl)-3-(3-

sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47851-73-0

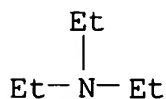
CMF C27 H26 Cl2 F3 N3 O7 S2



CM 2

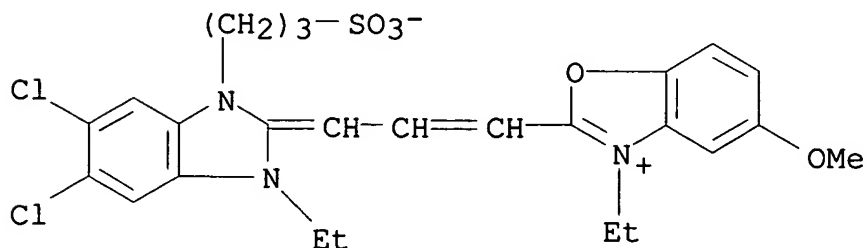
CRN 121-44-8

CMF C6 H15 N



RN 36505-90-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methoxy-, inner salt (9CI) (CA INDEX NAME)

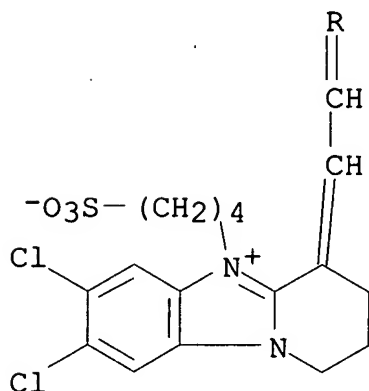
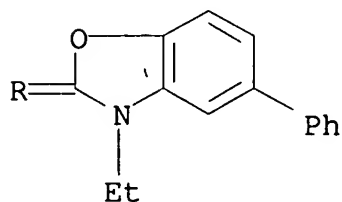


USHA SHRESTHA

REM 4B28

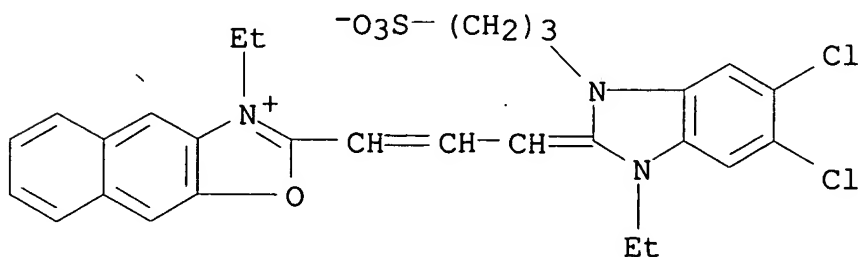
RN 36505-91-6 HCAPLUS

CN Pyrido[1,2-a]benzimidazolium, 7,8-dichloro-4-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)ethylidene]-1,2,3,4-tetrahydro-5-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



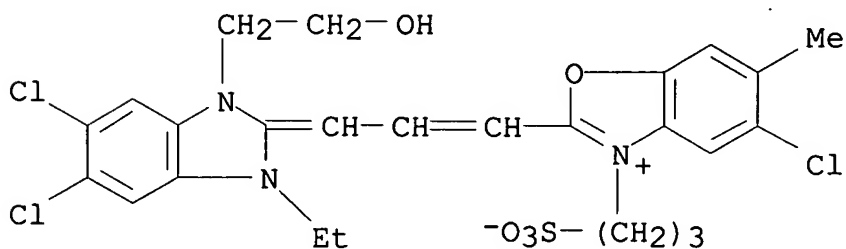
RN 36505-92-7 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



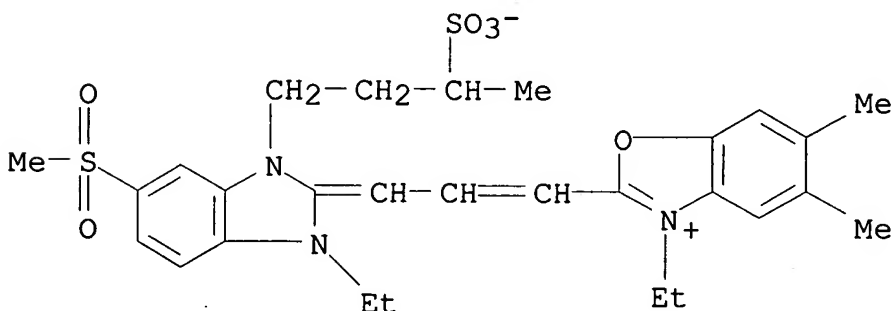
RN 36505-93-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(2-hydroxyethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



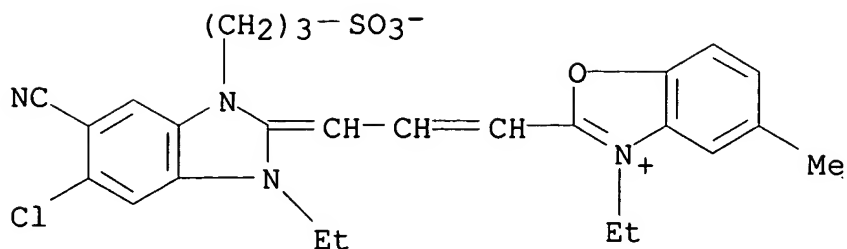
RN 36505-94-9 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-[1-ethyl-1,3-dihydro-5-(methylsulfonyl)-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5,6-dimethyl-, inner salt (9CI) (CA INDEX NAME)



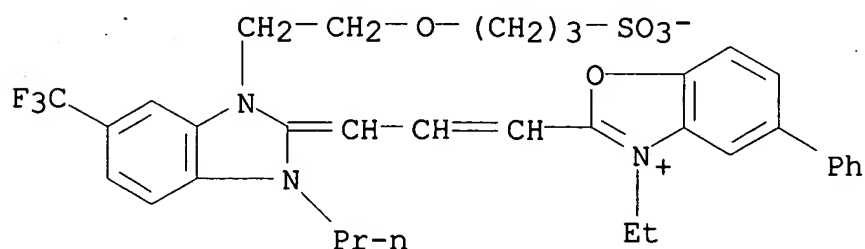
RN 36505-95-0 HCAPLUS

CN Benzoxazolium, 2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methyl-, inner salt (9CI) (CA INDEX NAME)



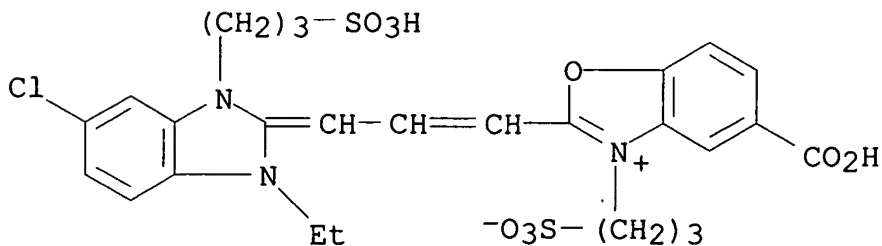
RN 36505-96-1 HCAPLUS

CN Benzoxazolium, 2-[3-[1,3-dihydro-1-propyl-3-[2-(3-sulfopropoxy)ethyl]-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-phenyl-, inner salt (9CI) (CA INDEX NAME)



RN 36505-97-2 HCAPLUS

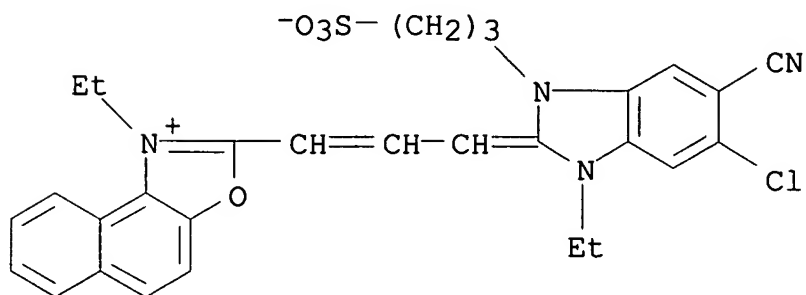
CN Benzoxazolium, 5-carboxy-2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 36505-98-3 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



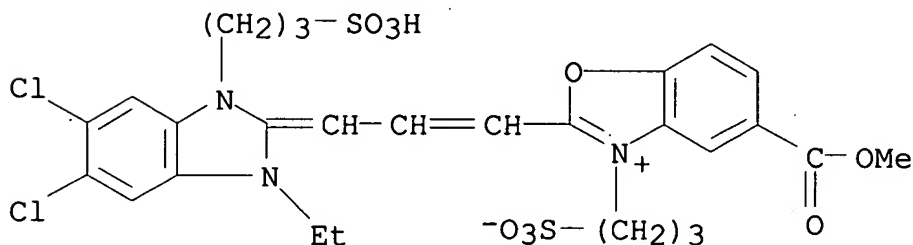
RN 36536-15-9 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-(methoxycarbonyl)-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47845-48-7

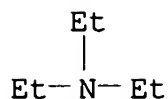
CMF C27 H29 Cl2 N3 O9 S2



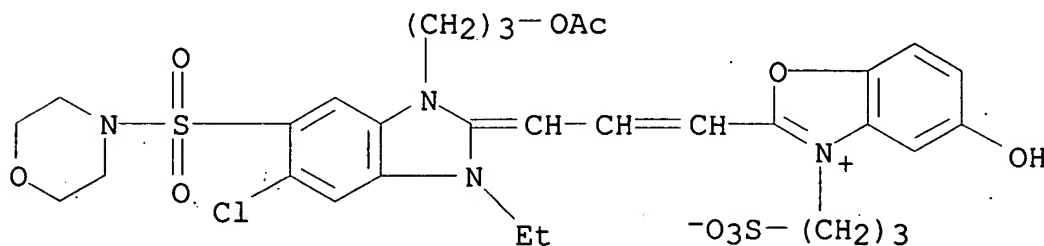
CM 2

CRN 121-44-8

CMF C6 H15 N



RN 60379-54-6 HCAPLUS  
 CN Benzoxazolium, 2-[3-[1-[3-(acetyloxy)propyl]-5-chloro-3-ethyl-1,3-dihydro-6-(4-morpholinylsulfonyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-hydroxy-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC G03C  
 NCL 096124000  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic Processes**)  
 IT 29708-48-3 36505-99-4 36506-01-1  
 (photog. supersensitizers from benzimidazolooxacarboyanine dyes and)  
 IT 36505-89-2 36505-90-5 36505-91-6  
 36505-92-7 36505-93-8 36505-94-9  
 36505-95-0 36505-96-1 36505-97-2  
 36505-98-3 36536-15-9 60379-54-6  
 (photog. supersensitizers from imidazolocarbocyanine dyes and)

L29 ANSWER 57 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1975:450704 HCAPLUS  
 DOCUMENT NUMBER: 83:50704  
 TITLE: Photographic silver halide emulsion  
 INVENTOR(S): Hinata, Masanao; Takei, Haruo; Sato, Akira; Ogawa, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Ger. Offen., 40 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2439148	A1	19750306	DE 1974-2439148	1974 0814
JP 50040128	A2	19750412	JP 1973-91896	1973 0816
JP 56038939	B4	19810909		
GB 1431647	A	19760414	GB 1974-36292	1974 0816
US 3953216	A	19760427	US 1974-498143	1974 0816

PRIORITY APPLN. INFO.: JP 1973-91896 A 1973 0816

AB A process is described for supersensitizing Ag halide emulsions in the green region by adding to the emulsion a combination of an oxacarbocyanine dye (I) with an imidazolocarbo-cyanine dye (II) at a total concentration  $1 + 10^{-6} - 5 + 10^{-3}$  mole/mole Ag with a II/I molar ratio of 2-20. The dye combination may be added as an aqueous or an organic solution. The described supersensitization is useful

for preparation of a multilayer color Ag halide emulsion containing couplers. The dye combinations also have spectral compatibility with known **green-sensitizing** dyes for Ag halide emulsions.

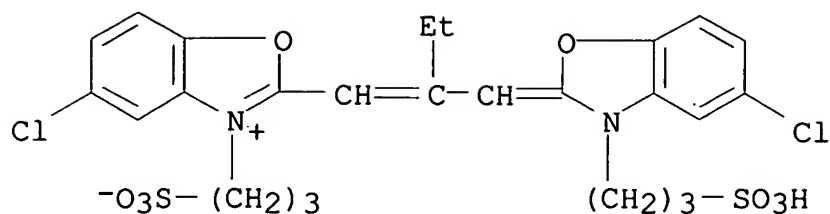
IT 18360-25-3 28413-71-0 56133-67-6  
56190-49-9

(photog. supersensitizers from imidazolocarbo-cyanine dyes and, for sensitization in green region)

RN 18360-25-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)





● Na

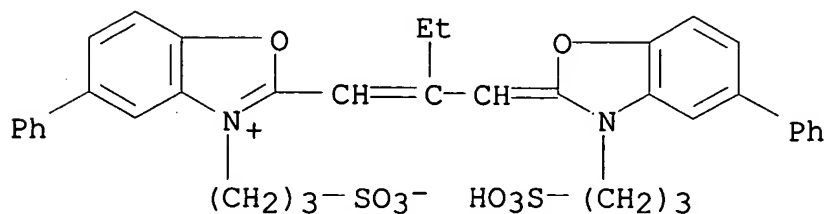
RN 28413-71-0 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29133-39-9

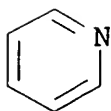
CMF C37 H36 N2 O8 S2



CM 2

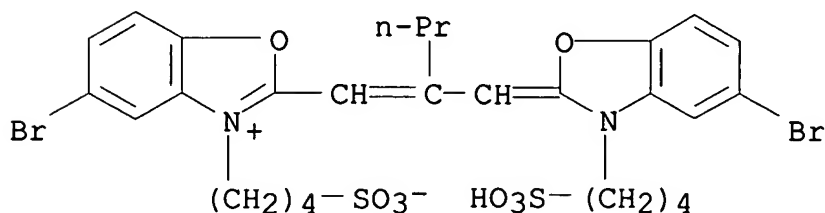
CRN 110-86-1

CMF C5 H5 N



RN 56133-67-6 HCAPLUS

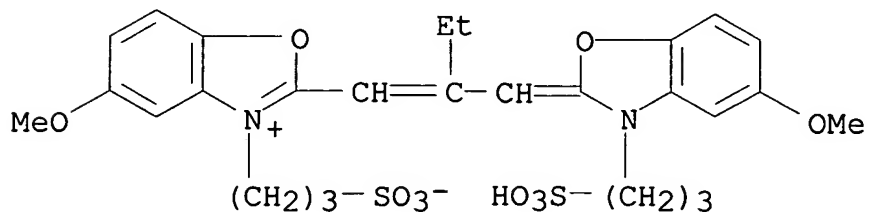
CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-pentenyl]-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 56190-49-9 HCAPLUS

CN Benzoxazolium, 5-methoxy-2-[2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IC G03C

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic Processes**)IT 18360-25-3 28413-71-0 56133-67-6  
56190-49-9

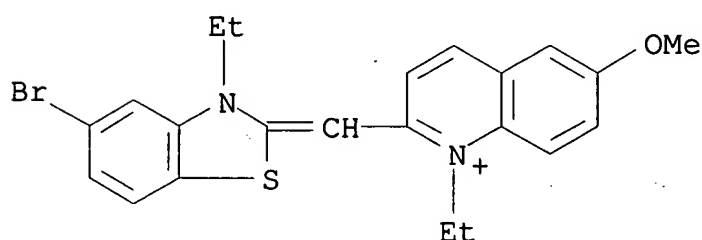
(photog. supersensitizers from imidazolocarbocyanine dyes and, for sensitization in green region)

L29 ANSWER 58 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1974:579897 HCAPLUS  
 DOCUMENT NUMBER: 81:179897  
 TITLE: Radiographic film-screen combination  
 INVENTOR(S): Fass, Leonard; Fatuzzo, Ennio; Oggioni, Roberto  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co.  
 SOURCE: Ger. Offen., 32 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2406810	A1	19740912	DE 1974-2406810	1974 0213
IT 984247	A	19741120	IT 1973-48229	1973 0213
JP 50008523	A2	19750129	JP 1974-17471	1974 0213
PRIORITY APPLN. INFO.:			IT 1973-48229	A 1973 0213

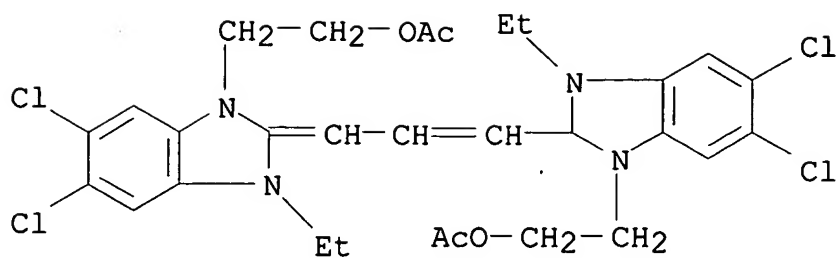
AB Radiog. film-intensifying screen combinations leading to images of increased sharpness without impairing the sensitivity consisted of a radiog. film, emulsion-coated only on 1 side, and 2 intensifying screens, whereby the spectral sensitization maximum of the Ag halide emulsion coincides with the main fluorescence maximum of the intensifying screens in the spectral region >500 nm within  $\pm 30$  nm. The Ag halide emulsions contained **green-sensitizing** carbocyanines or rhodanines and the screens Tb-doped rare earth oxide sulfides. Thus, a radiog. film consisting of a polyester support coated with a Ag(Br,I) emulsion containing 36 mg **green-sensitizing** dye/kg and combined with 2 intensifying screens containing Tb-doped Gd oxysulfide was exposed to 80 kV and 2.5 mA and had sensitivity difference (with respect to a common combination consisting of a com. film

and 2 standard screens) +0.4, relative blur number 74, and fog 0.20  
 vs. ±0, 100, and 0.21, resp., for the above common combination.  
 IT **53841-41-1**  
 (photog. **green sensitizer**, for radiog.  
 film)  
 RN 53841-41-1 HCAPLUS  
 CN Quinolinium, 2-[(5-bromo-3-ethyl-2(3H)-benzothiazolylidene)methyl]-  
 1-ethyl-6-methoxy-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

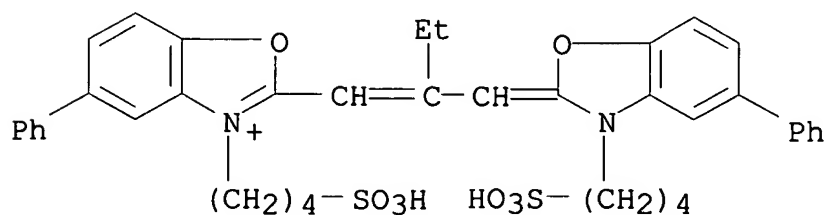
IT **25243-59-8 53841-34-2 53841-35-3**  
**53841-40-0**  
 (photog. **green sensitizer**, for radiog.  
 films)  
 RN 25243-59-8 HCAPLUS  
 CN 1H-Benzimidazolium, 1-[2-(acetyloxy)ethyl]-2-[3-[3-[2-(  
 (acetyloxy)ethyl]-5,6-dichloro-1-ethyl-1,3-dihydro-2H-benzimidazol-  
 2-ylidene]-1-propenyl]-5,6-dichloro-3-ethyl-, bromide (9CI) (CA  
 INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

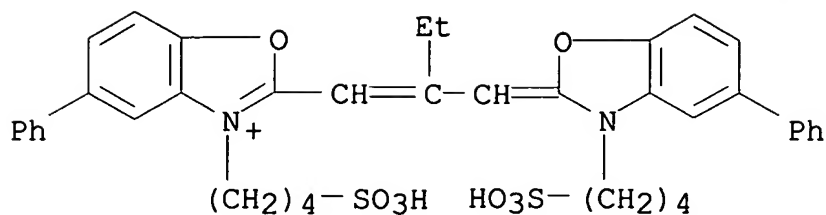
RN 53841-34-2 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)- (9CI) (CA INDEX NAME)



RN 53841-35-3 HCAPLUS

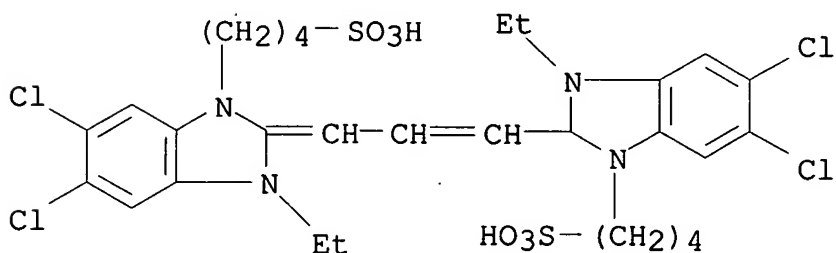
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 53841-40-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(4-sulfobutyl)-, monosodium salt (9CI) (CA INDEX NAME)



● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC G03C

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)

ST radiog film intensifying screen; **green sensitizer** radiog film; carbocyanine sensitizer radiog film; rhodanine sensitizer radiog film; terbium radiog intensifying screen; gadolinium oxide sulfide radiog

IT 53841-41-1

(photog. **green sensitizer**, for radiog. film)

IT 25243-59-8 41672-57-5 53841-34-2  
 53841-35-3 53841-36-4 53841-37-5 53841-38-6  
 53841-39-7 53841-40-0

(photog. **green sensitizer**, for radiog.  
 films)

L29 ANSWER 59 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1974:456585 HCAPLUS

DOCUMENT NUMBER: 81:56585

TITLE: Silver halide emulsion containing sensitizing  
 dye combination

INVENTOR(S): Hill, Ruth Linda; Rosenoff, Alan E.

PATENT ASSIGNEE(S): Polaroid Corp.

SOURCE: U.S., 9 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 3799783	A	19740326 /	US 1972-214745	1972 0103

PRIORITY APPLN. INFO.:

US 1972-214745 A  
 1972  
 0103

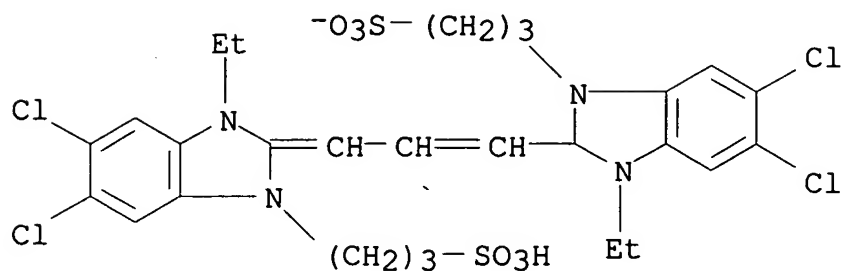
AB A combination of unsym. 2'-cyanine dyes and a  
 benzimidazolocarbo-cyanine dye is used to improve the **green  
 sensitivity** of photog. Ag halide emulsions. Thus, a  
 photog. Ag(Br,I) emulsion film assembly was sensitized over the  
 entire green region of the spectrum with a combination of  
 5,5',6,6' -tetrachloro-1,1' -diethyl-3,3' -bis( $\gamma$ -  
 sulfopropyl)benz-imidazolocarbo-cyanine betaine sodium salt,  
 3-carboxymethyl-1'-ethyl-5,6'-dimethoxythia-2'-cyanine betaine,  
 and 3-carboxymethyl-1'-ethylthia-2'-cyanine betaine.

IT 28272-54-0 53288-82-7 53288-83-8  
 (photog. **green sensitizing** combination  
 containing)

RN 28272-54-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-  
 dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-

ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

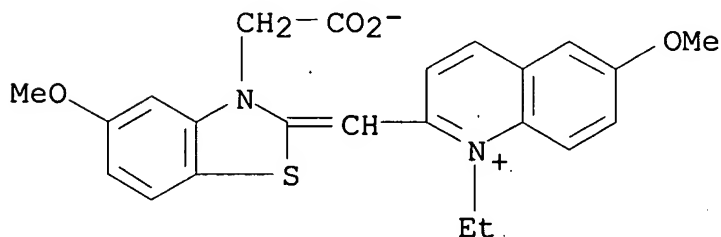


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 53288-82-7 HCAPLUS

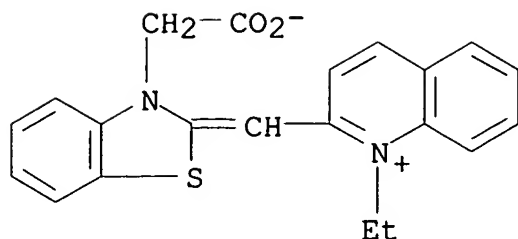
CN Quinolinium, 2-[[3-(carboxymethyl)-5-methoxy-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methoxy-, inner salt (9CI) (CA INDEX NAME)



RN 53288-83-8 HCAPLUS

CN Quinolinium, 2-[[3-(carboxymethyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)





IC G03C  
 NCL 096124000  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic Processes**)  
 ST **green sensitization** photog emulsion; cyanine  
 benzimidazolocarbocyanine **green sensitizer**  
 IT **28272-54-0 53288-82-7 53288-83-8**  
 (photog. **green sensitizing** combination  
 containing)

L29 ANSWER 60 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1974:408363 HCAPLUS  
 DOCUMENT NUMBER: 81:8363  
 TITLE: Sensitized photosensitive silver halide  
 composition  
 INVENTOR(S): Shiba, Keisuke; Mihara, Yuji; Ohkubo, Kinji;  
 Masuda, Takao; Tsuji, Koji  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.  
 SOURCE: Ger. Offen., 68 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
DE 2328868	A1	19731213	DE 1973-2328868	1973 0606
JP 49017719	A2	19740216	JP 1972-56332	1972 0606
JP 57046052	B4	19821001		

GB 1422057

A

19760121

GB 1973-27094

1973

0606

PRIORITY APPLN. INFO.:

JP 1972-56332

A

1972

0606

AB Photog. emulsions containing >30 mole % AgI can be spectrally sensitized efficiently with dyes having an oxidation potential of <1 V and a difference between the oxidation and reduction potentials of

&gt;2

V. Redox potentials of 27 suitable dyes are given. These dyes are especially useful in heat-developable systems, where they also give good contrast. In such systems most of the Ag is present as an organic salt, with an inorg. iodide added to form the light-sensitive AgI. Thus, 100 ml. of a solution containing 20.5 g Hg(NO<sub>3</sub>)<sub>2</sub> (pH 2 with

HNO<sub>3</sub>) was added dropwise to 100 ml. of 11 g lauric acid in BuOAc at 10°. Then 50 ml. of 1 mole % [Ag(NH<sub>3</sub>)<sub>2</sub>]NO<sub>3</sub> was added. The Ag laurate was washed with H<sub>2</sub>O and with Me<sub>2</sub>CO, and then dispersed in 120 g of 15% poly(vinyl butyral) in iso-PrOH. To 20 g of this dispersion, the following were added: 1 ml. of 3.2% NH<sub>4</sub>I in MeOH, 1 ml. of 0.1% of the betaine form of 5,5'-diphenyl-3,3'-disulfopropyl-9-ethyl-oxa-carbocyanine (I) (oxidation potential of 0.878 V and reduction potential of -1.274 V) in MeOH, 1 ml. of 25% phthalazinone in Me Cellosolve, and 2 ml. of 70% p-phenylphenol in Me Cellosolve. This dispersion was coated on polyester support at a coverage of 1 g Ag/m<sup>2</sup>. After drying at 50° for 30 min an overcoat of 15% (85:15) vinyl chloride-vinyl acetate polymer in THF was applied and dried. The system was exposed through a negative to 250,000 lux from a W lamp and developed at 120° for 20 sec to give a good positive. A spectrogram showed the expected **green sensitivity**. A

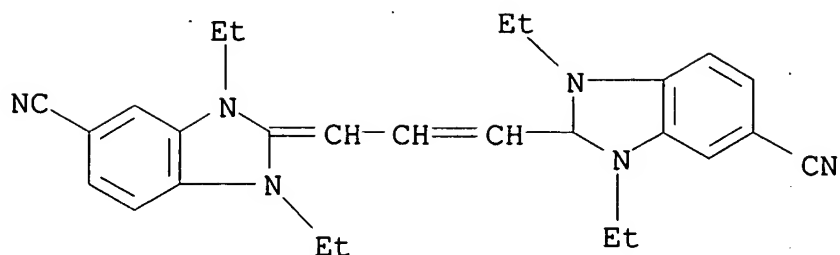
I-free control gave a blurred, indistinct, and mottled image.

IT **4751-34-2 28279-05-2 33628-03-4**  
**33904-84-6 39201-42-8 39201-43-9**  
**53134-49-9**

(photographic sensitizer, for heat-developable silver halide emulsions)

RN 4751-34-2 HCAPLUS

CN 1H-Benzimidazolium, 5(or 6)-cyano-2-[3-(5-cyano-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1,3-diethyl-, iodide (9CI) (CA INDEX NAME)

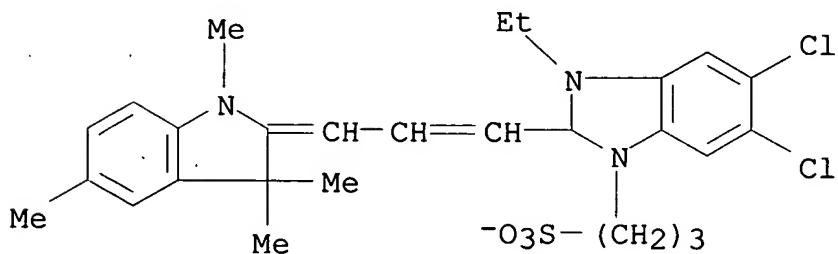


● I<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28279-05-2 HCAPLUS

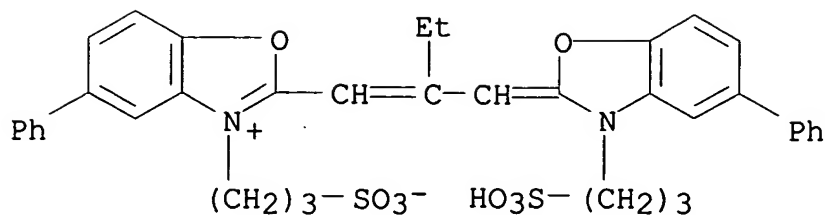
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(1,3-dihydro-1,3,3,5-tetramethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 33628-03-4 HCAPLUS

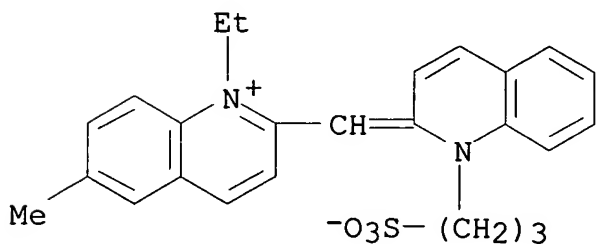
CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 33904-84-6 HCAPLUS

CN Quinolinium, 1-ethyl-6-methyl-2-[[1-(3-sulfopropyl)-2(1H)-quinolinyliidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



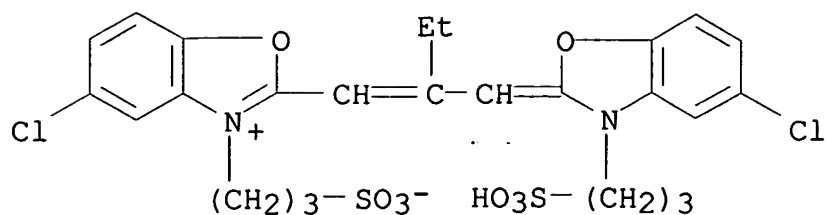
RN 39201-42-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

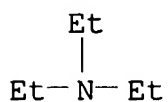
CMF C25 H26 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

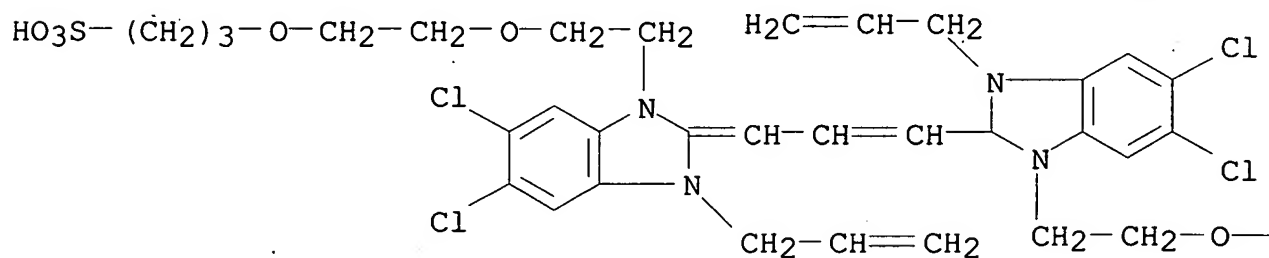
CMF C6 H15 N



RN 39201-43-9 HCAPLUS

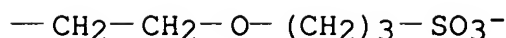
CN 1H-Benzimidazolium, 5,6-dichloro-2-[5,6-dichloro-1,3-dihydro-1-(2-propenyl)-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-2H-benzimidazol-2-ylidene]-1-(2-propenyl)-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

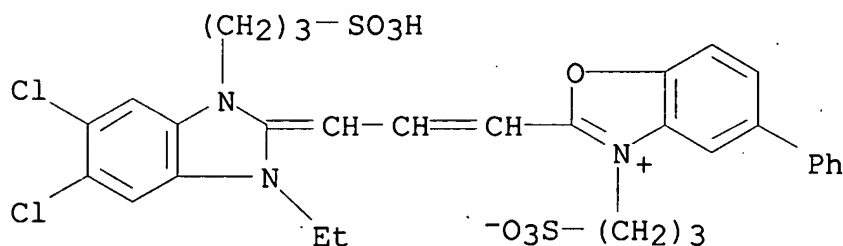
PAGE 1-B



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 53134-49-9 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



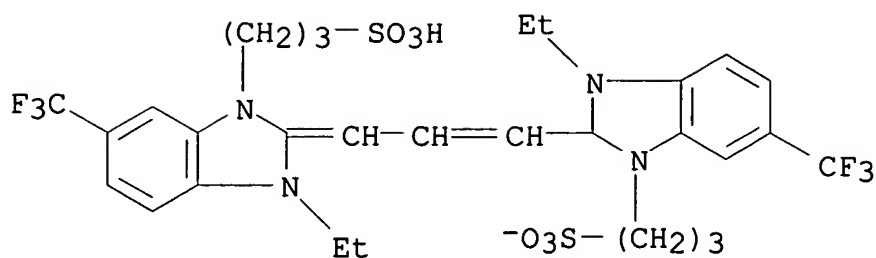
● Na

IT 36506-01-1 39201-45-1 41528-00-1  
52686-19-8 53134-52-4

(redox potential of)

RN 36506-01-1 HCAPLUS

CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

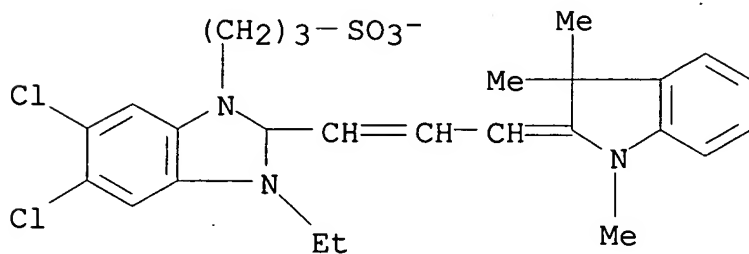


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 39201-45-1 HCAPLUS

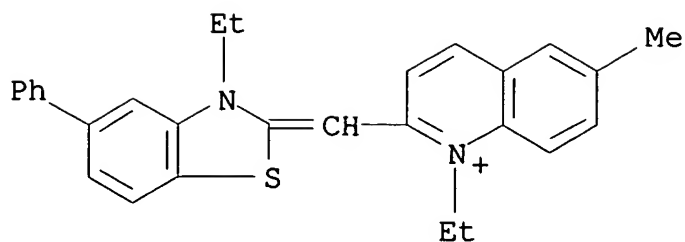
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

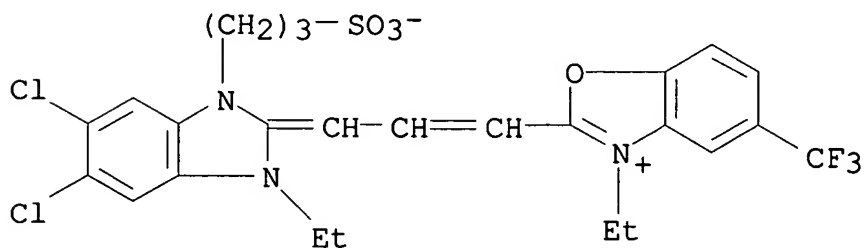
RN 41528-00-1 HCAPLUS

CN Quinolinium, 1-ethyl-2-[3-ethyl-5-phenyl-2(3H)-benzothiazolylidene)methyl]-6-methyl-, iodide (9CI) (CA INDEX NAME)



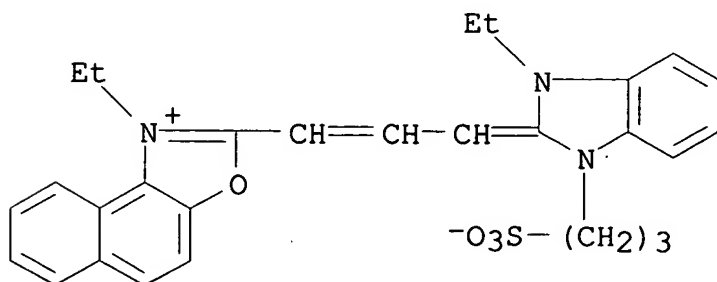
RN 52686-19-8 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-(trifluoromethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 53134-52-4 HCAPLUS

CN Naphth[1,2-d]oxazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)





IC G03C  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)  
 IT 3568-36-3 **4751-34-2** 13531-54-9 **28279-05-2**  
**33628-03-4 33904-84-6** 38254-98-7  
**39201-42-8 39201-43-9** 40442-44-2  
**53134-49-9** 53134-50-2  
 (photographic sensitizer, for heat-developable silver halide  
 emulsions)  
 IT 5190-65-8 23405-68-7 25962-08-7 **36506-01-1**  
 38595-49-2 **39201-45-1 41528-00-1** 52578-78-6  
**52686-19-8** 53134-50-2 **53134-52-4** 53134-53-5  
 53134-54-6 53134-55-7 53134-57-9 53191-63-2  
 (redox potential of)

L29 ANSWER 61 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1974:21393 HCAPLUS  
 DOCUMENT NUMBER: 80:21393  
 TITLE: Photographic silver bromiodide emulsions with  
 improved **green sensitivity**  
 INVENTOR(S): Ueda, Hirozo; Shiba, Keisuke; Sato, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.  
 SOURCE: Ger. Offen., 38 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE -----
DE 2252585	A1	19730503	DE 1972-2252585	1972 1026
DE 2252585	C2	19871203		
JP 48051627	A2	19730720	JP 1971-85835	1971 1028
FR 2157975	A1	19730608	FR 1972-37990	1972 1026
GB 1413826	A	19751112	GB 1972-49776	1972 1027

US 3864134

A

19750204

US 1972-301912

1972

1030

PRIORITY APPLN. INFO.:

JP 1971-85835

A

1971

1028

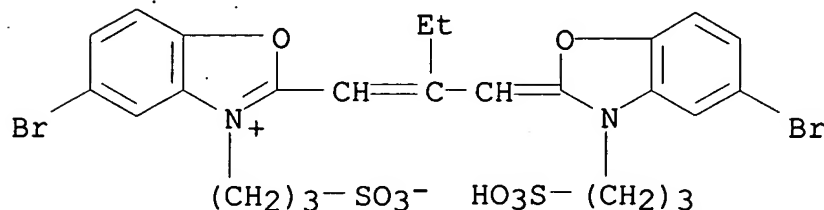
AB The sensitivity of **green-sensitized**, Ag(I, Br) photog. emulsions can be increased by adding 0.05 to 0.3 mole % I<sup>-</sup> based on Ag before adding the spectral sensitizer. KI is the usual source of I<sup>-</sup>. **Green sensitizers** can be either oxacyanines such as anhydro-3,3'-bis(sulfopropyl)-5,5'-dichloro-9-ethyloxacarbocyanine, or sym. or unsym. imidocyanines, such as anhydro-3,3'-bis(sulfopropyl)-5,5',6,6'-tetrachloroimidocarbocyanine, or combinations of both types. Internal salts or dyes with I<sup>-</sup> or other counterions can be used. The addition of the I<sup>-</sup> can double the **green sensitivity**, with no change in the wavelength of the peak sensitivity.

IT 6099-47-4 6099-52-1 6200-35-7  
28784-33-0 40703-14-8 41665-47-8  
47845-48-7 50671-54-0 51859-20-2  
51859-22-4 51859-25-7

(photog. sensitizer from iodide and, for improved **green sensitivity**)

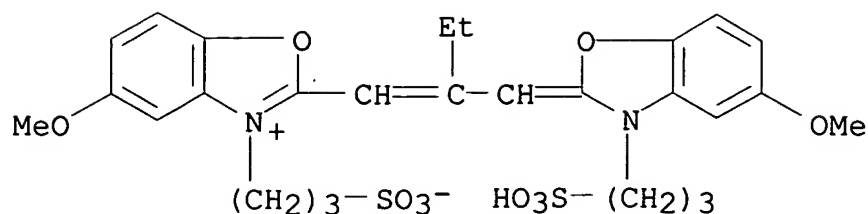
RN 6099-47-4 HCAPLUS

CN Benzoxazolium, 5-bromo-2-[2-[[5-bromo-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



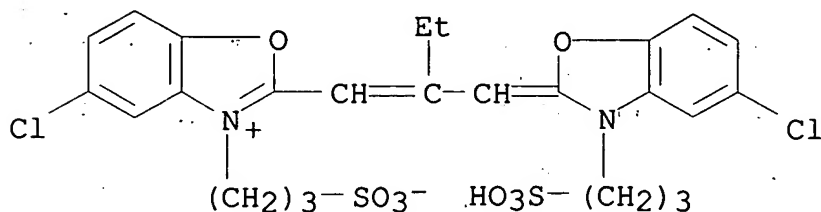
RN 6099-52-1 HCAPLUS

CN Benzoxazolium, 5-methoxy-2-[2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



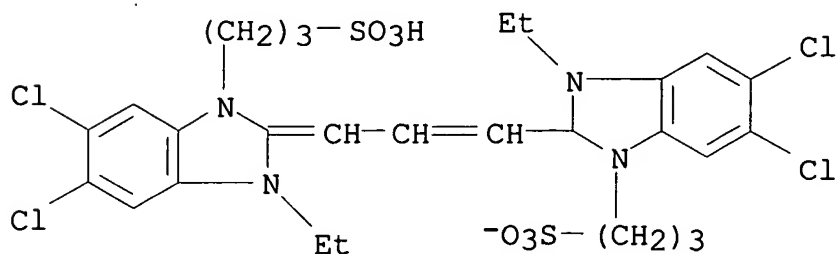
RN 6200-35-7 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 28784-33-0 HCAPLUS

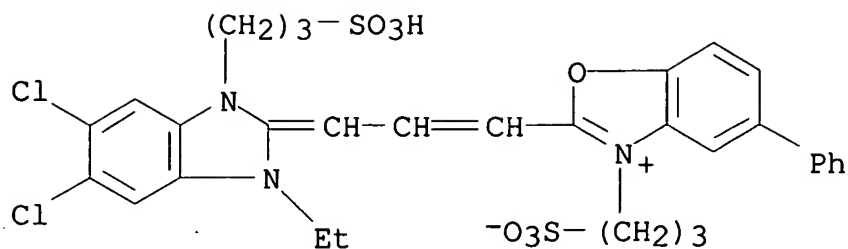
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

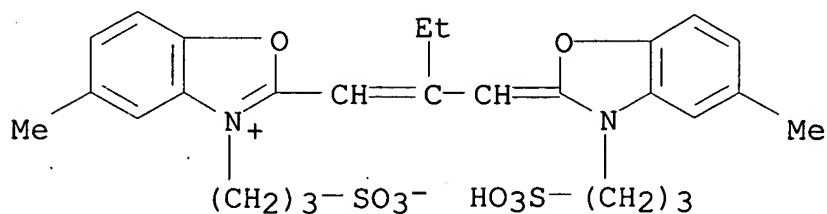
RN 40703-14-8 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



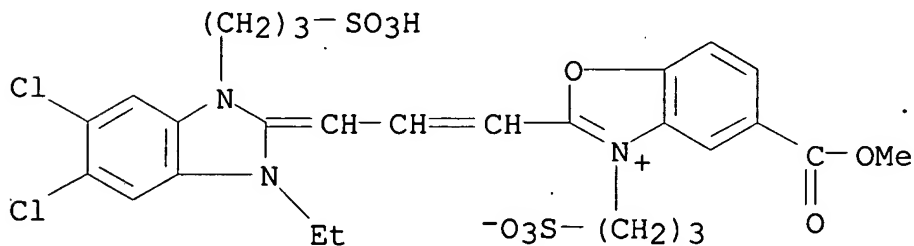
RN 41665-47-8 HCAPLUS

CN Benzoxazolium, 5-methyl-2-[2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



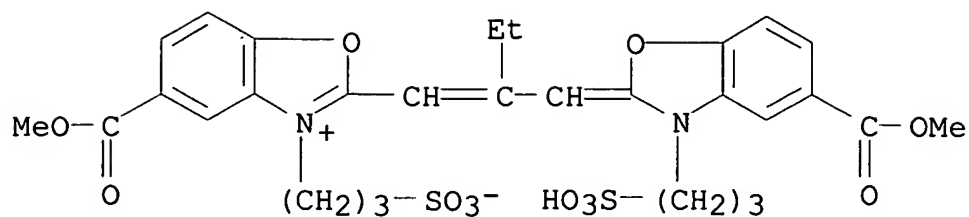
RN 47845-48-7 HCAPLUS

CN Benzoxazolium, 2-[3-(5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene)-1-propenyl]-5-(methoxycarbonyl)-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



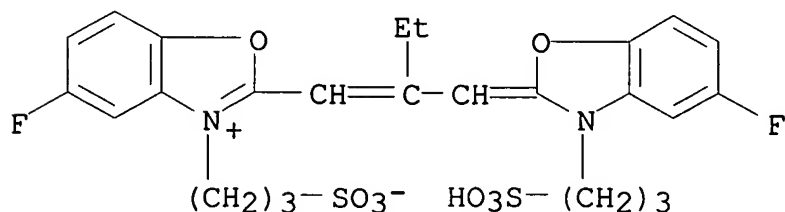
RN 50671-54-0 HCAPLUS

CN Benzoxazolium, 5-(methoxycarbonyl)-2-[2-[[5-(methoxycarbonyl)-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



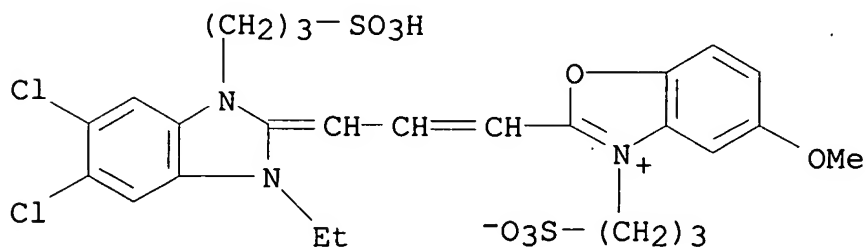
RN 51859-20-2 HCAPLUS

CN Benzoxazolium, 5-fluoro-2-[2-[[5-fluoro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



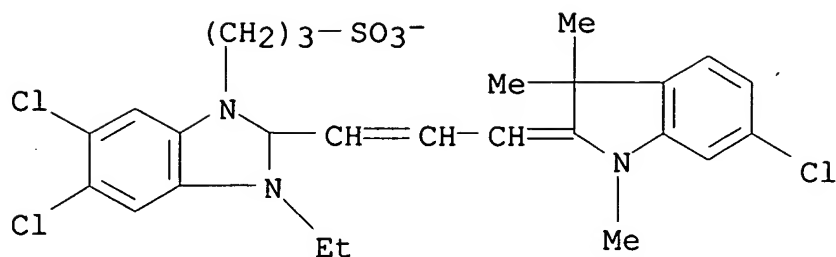
RN 51859-22-4 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-methoxy-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 51859-25-7 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(6-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC G03C

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic Processes**)

ST **green sensitization** photog iodide

IT Photographic sensitizers  
(cyanine dye-iodide mixts. as, for **green-sensitized** emulsions)

IT Photographic emulsions  
(**green-sensitized**, containing iodide for increased sensitivity)

IT 20461-54-5  
(photog. **green-sensitized** emulsions containing, for increased sensitivity)

IT **6099-47-4 6099-52-1 6200-35-7**

**28784-33-0 40703-14-8 41665-47-8**

**47845-48-7 50671-54-0 51859-20-2**

**51859-22-4 51859-25-7**

(photog. sensitizer from iodide and, for improved **green sensitivity**)

L29 ANSWER 62 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1974:9072 HCAPLUS

DOCUMENT NUMBER: 80:9072

TITLE: Photographic film element and method for obtaining photographic records of water-submerged objects

INVENTOR(S): Needler, Daniel G.; Graham, James Leo

PATENT ASSIGNEE(S): Eastman Kodak Co.

SOURCE: U.S., 10 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3752670	A	19730814 /	US 1971-213813	1971 1229

PRIORITY APPLN. INFO.:

US 1971-213813	A	1971 1229
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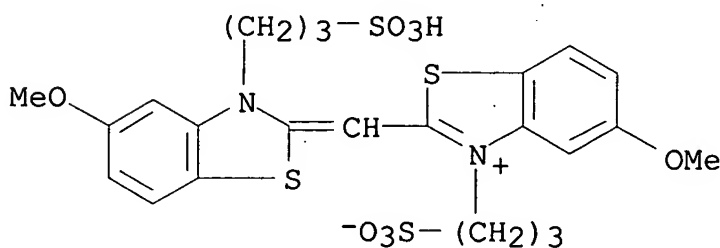
AB A color photog. element having improved properties for recording objects underwater is comprised of a blue-sensitized Ag halide emulsion layer (maximum absorption 480-500 nm) containing a benzo- or naphthothia-, oxa- or selenacarbocyanine salt as the blue spectral sensitizing dye, an inner **green-sensitized** emulsion layer (maximum absorption 525-590 nm), and an intermediate filter layer that filters light in the range of .apprx.400-520 nm.

IT 51588-61-5 51588-62-6 51588-63-7  
51588-64-8 51588-65-9 51650-39-6

(photog. sensitizer, for color emulsion for use in underwater photog.)

RN 51588-61-5 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

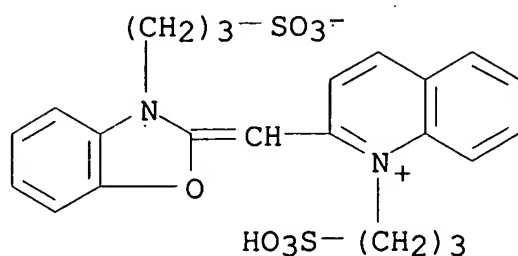
RN 51588-62-6 HCAPLUS

CN Quinolinium, 1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-, inner salt, sodium salt (9CI) (CA

USHA SHRESTHA

REM 4B28

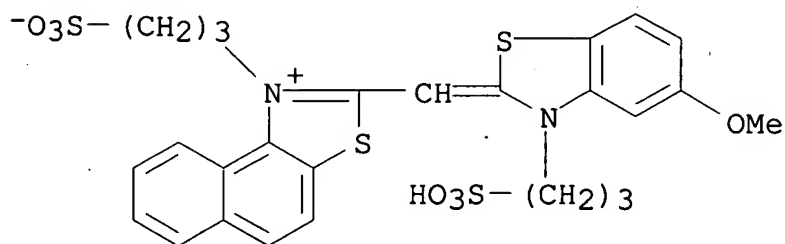
INDEX NAME)



● Na

RN 51588-63-7 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

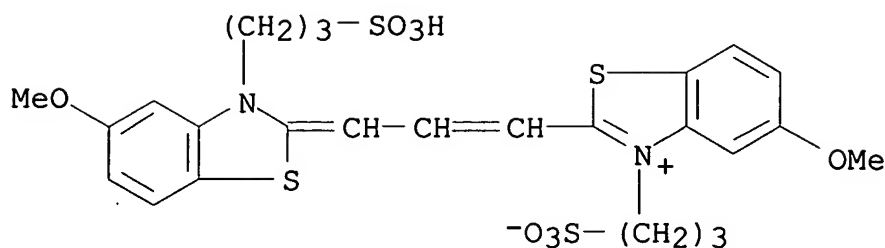


● Na

RN 51588-64-8 HCAPLUS

CN Benzothiazolium, 5-methoxy-2-[3-[5-methoxy-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

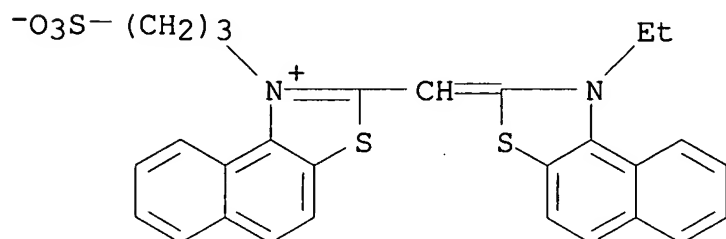




● Na

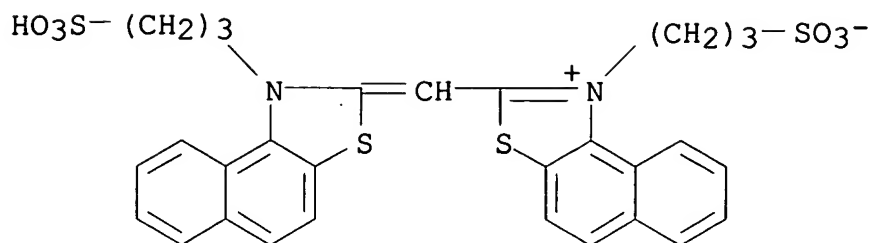
RN 51588-65-9 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[(1-ethylnaphtho[1,2-d]thiazol-2(1H)-ylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 51650-39-6 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IC G03C  
 NCL 096074000  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic Processes**)  
 IT **51588-61-5 51588-62-6 51588-63-7**  
**51588-64-8 51588-65-9 51650-39-6**  
 (photog. sensitizer, for color emulsion for use in underwater  
 photog.)

L29 ANSWER 63 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1973:117599 HCAPLUS

DOCUMENT NUMBER: 78:117599

TITLE: **Green-sensitive** silver  
 halide emulsions for use in diffusion-transfer  
 photography

INVENTOR(S): Shiba, Keisuke; Hinata, Masanao; Oishi,  
 Yasushi; Yoshida, Yoshinobu; Sato, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.

SOURCE: Ger. Offen., 56 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2221496	A	19721207	DE 1972-2221496	1972

USHA SHRESTHA REM 4B28

JP 51008010	B4	19760312	JP 1971-28793	0502
				1971
				0430
AU 7241570	A1	19731101	AU 1972-41570	1972
				0426
FR 2161876	A1	19730713	FR 1972-15187	1972
				0428
US 3840376	A	19741008 /	US 1972-248691	1972
				0428
GB 1354240	A	19740522	GB 1972-20226	1972
				0501
PRIORITY APPLN. INFO.:			JP 1971-28793	A
				1971
				0430

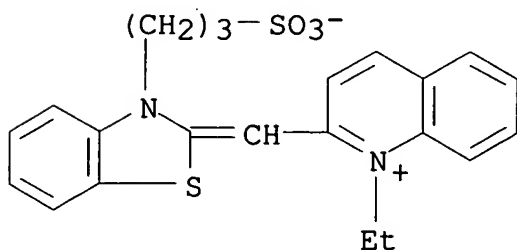
GI For diagram(s), see printed CA Issue.

AB A supersensitizing dye combination of an imidacarbocyanine with a thia- o selenapseudocyanine, each dye containing 1 or 2 carboxyalkyl or sulfoalkyl N-substituents, minimizes desensitization of the emulsion by diffusing azo- or anthraquinone dye developers. Thus, by combined use of I and II a relative emulsion speed of 230 could be obtained, compared with 76 and 34 for the individual dyes alone.

IT **21521-26-6 41434-46-2 41434-47-3**  
**41434-48-4 41434-49-5 41486-64-0**  
 (photographic supersensitizers from imidacarbocyanine dyes and)

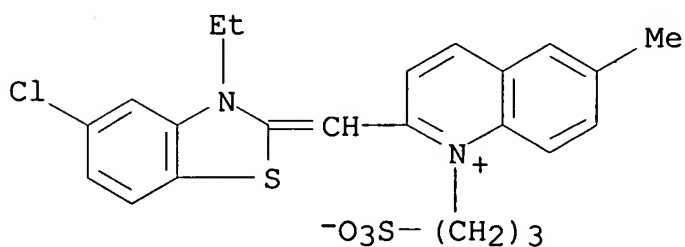
RN 21521-26-6 HCAPLUS

CN Quinolinium, 1-ethyl-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



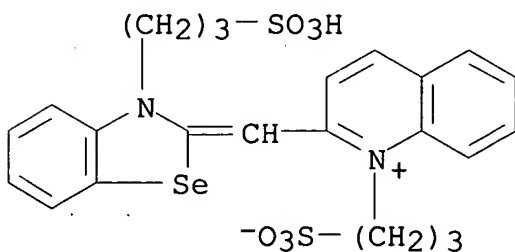
RN 41434-46-2 HCAPLUS

CN Quinolinium, 2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-6-methyl-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



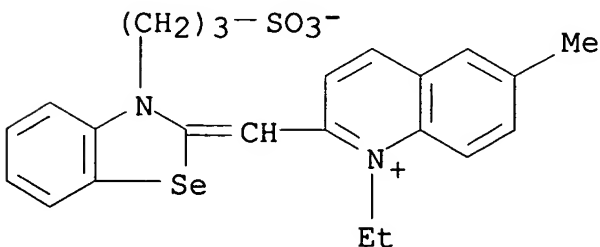
RN 41434-47-3 HCAPLUS

CN Quinolinium, 1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 41434-48-4 HCAPLUS

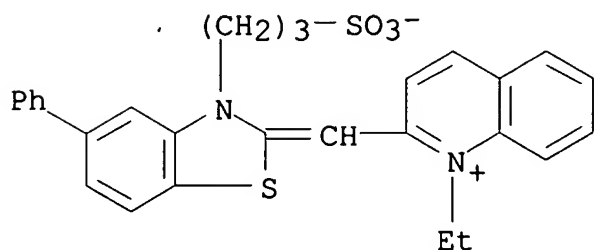
CN Quinolinium, 1-ethyl-6-methyl-2-[[3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 41434-49-5 HCAPLUS

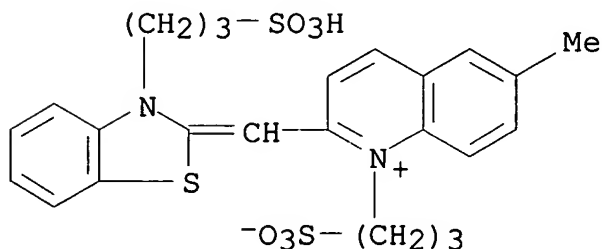
CN Quinolinium, 1-ethyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-

benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 41486-64-0 HCAPLUS

CN Quinolinium, 6-methyl-1-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)

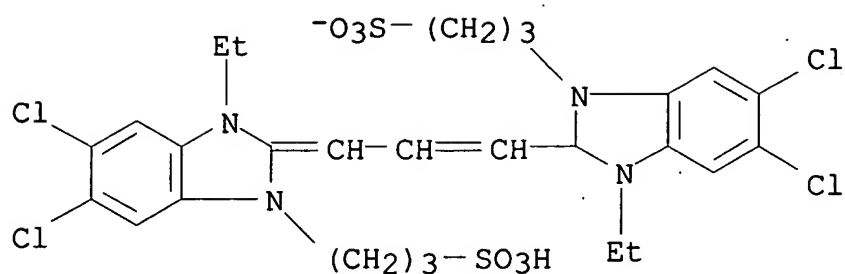


IT 28272-54-0 34329-97-0 36337-77-6  
36506-01-1

(photographic supersensitizers from thia- or selenapseudocyanine dyes and)

RN 28272-54-0 HCAPLUS

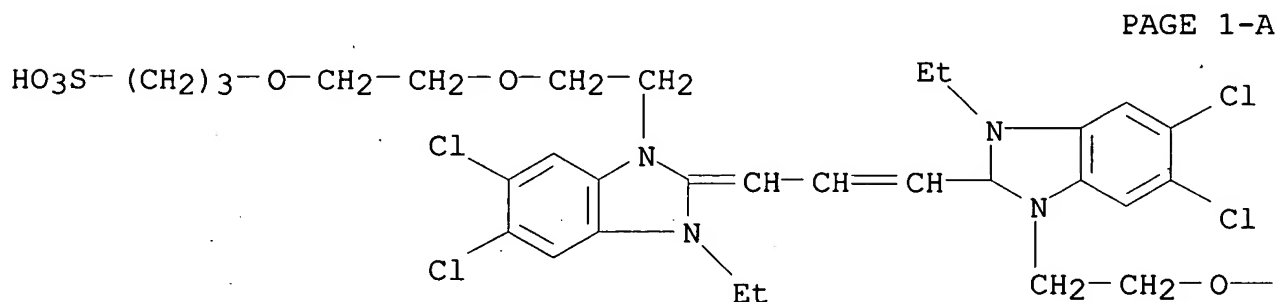
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



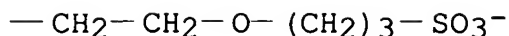
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 34329-97-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



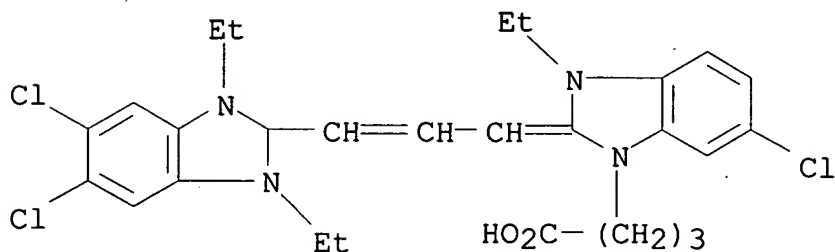
PAGE 1-B



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 36337-77-6 HCAPLUS

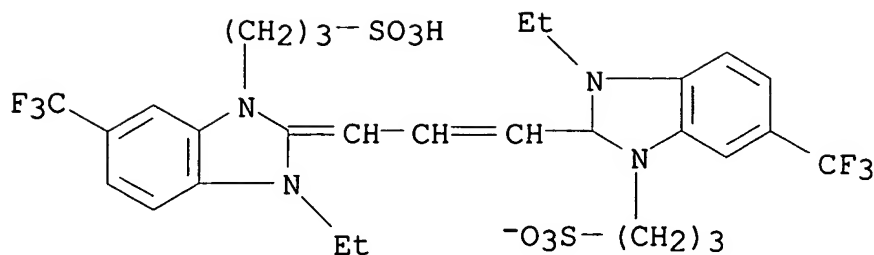
CN 1H-Benzimidazolium, 2-[3-[3-(3-carboxypropyl)-5-chloro-1-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-5,6-dichloro-1,3-diethyl-, iodide (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 36506-01-1 HCAPLUS

CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE.

IC G03C

CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)

IT 21521-26-6 41434-46-2 41434-47-3

41434-48-4 41434-49-5 41486-64-0

(photographic supersensitizers from imidacarbocyanine dyes and)

IT 28272-54-0 34329-97-0 36337-77-6

36506-01-1

(photographic supersensitizers from thia- or  
selenapseudocyanine dyes and)

L29 ANSWER 64 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1973:104444 HCAPLUS

DOCUMENT NUMBER: 78:104444

TITLE: Photographic supersensitizing dye combinations  
for greenINVENTOR(S): Shiba, Keisuke; Takei, Haruo; Sonoda, Minoru;  
Miyasaka, Nobuaki; Sato, Akira; Ogawa, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.

SOURCE: Ger. Offen., 58 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28



DE 2214208	A	19721026	DE 1972-2214208	1972 0323
JP 51021340	B4	19760701	JP 1971-16424	1971 0323
US 3840377	A	19741008	US 1972-237041	1972 0322
FR 2135136	A5	19721215	FR 1972-10137	1972 0323
GB 1392211	A	19750430	GB 1972-13767	1972 0323
PRIORITY APPLN. INFO.:			JP 1971-16424	A 1971 0323

GI For diagram(s), see printed CA Issue.

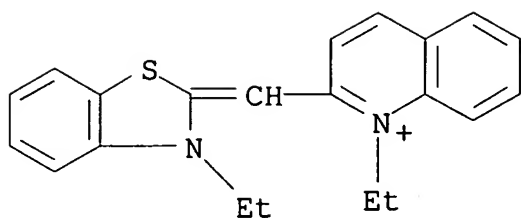
AB For sensitizing Ag halide emulsions to a high green (520-540nm) speed with min. residual stain at high-speed processing, suitable for x-radiog. with green-emitting intensifying screens, for cathode ray tube records, and for handling in red safelight, a combination of a thia or selena-2'-cyanine with a J-band type imidoxacarbocyanine containing 1 or 2 sulfoalkyl groups is used. Thus, a 4:7 combination of I 4 + 10-5 mole and II 7 + 10-5 mole/kg in a Ag(Br, I) (93:7) emulsion produced a relative **green sensitivity** of 170, vs. 100 and 125 for the individual dyes sep.

IT 16025-99-3 27075-09-8 29268-85-7  
29268-92-6 39201-47-3 41527-92-8  
41527-95-1 41527-96-2 41527-97-3  
41527-98-4 41528-00-1 41528-01-2  
41528-03-4 41528-04-5 41528-06-7  
41528-07-8 41528-08-9

(photographic supersensitizers from imidoxacarbocyanine dyes and, for radiographic emulsions)

RN 16025-99-3 HCAPLUS

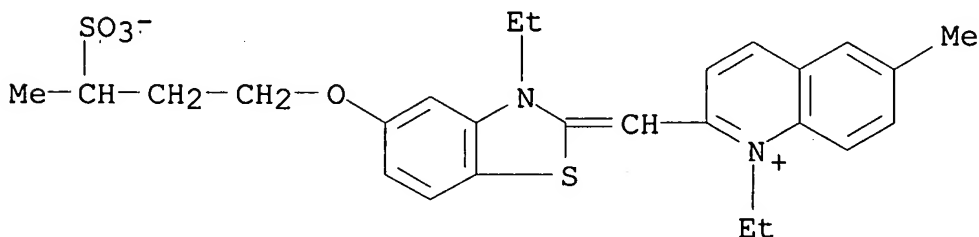
CN Quinolinium, 1-ethyl-2-[(3-ethyl-2(3H)-benzothiazolylylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

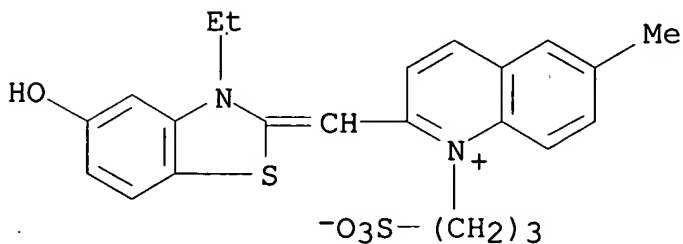
RN 27075-09-8 HCAPLUS

CN Quinolinium, 1-ethyl-2-[[3-ethyl-5-(3-sulfobutoxy)-2(3H)-benzothiazolylidene]methyl]-6-methyl-, inner salt (9CI) (CA INDEX NAME)



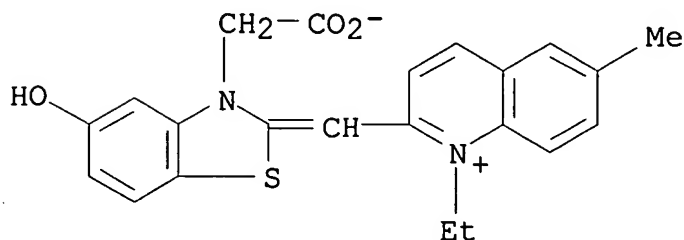
RN 29268-85-7 HCAPLUS

CN Quinolinium, 2-[(3-ethyl-5-hydroxy-2(3H)-benzothiazolylidene)methyl]-6-methyl-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



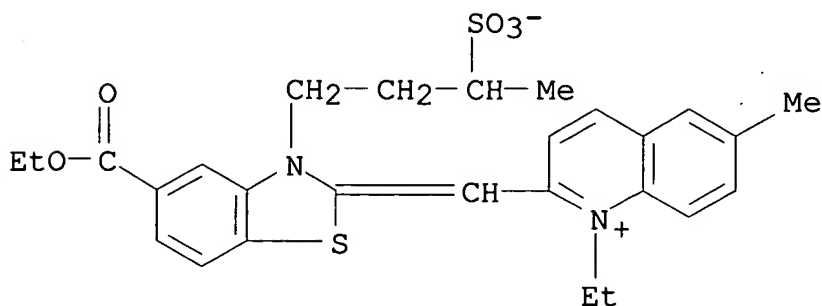
RN 29268-92-6 HCAPLUS

CN Quinolinium, 2-[[3-(carboxymethyl)-5-hydroxy-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methyl-, inner salt (9CI)  
(CA INDEX NAME)



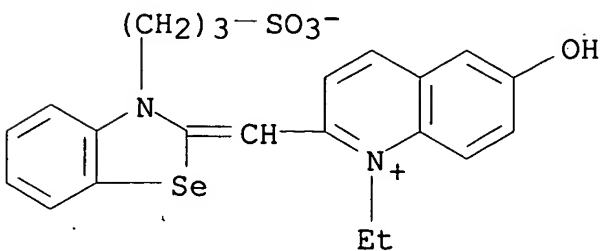
RN 39201-47-3 HCAPLUS

CN Quinolinium, 2-[[5-(ethoxycarbonyl)-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methyl-, inner salt (9CI)  
(CA INDEX NAME)

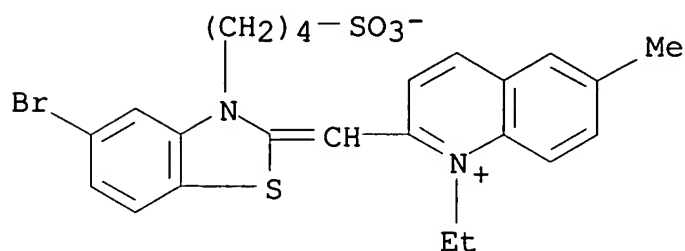


RN 41527-92-8 HCAPLUS

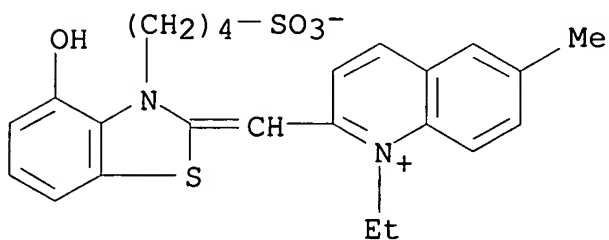
CN Quinolinium, 1-ethyl-6-hydroxy-2-[[3-(sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



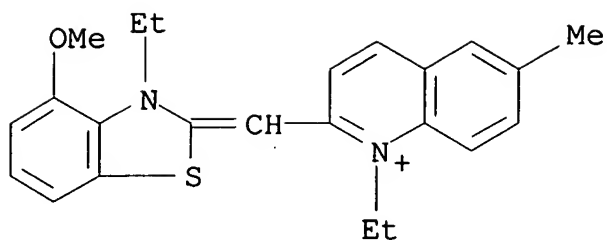
RN 41527-95-1 HCAPLUS  
 CN Quinolinium, 2-[[5-bromo-3-(4-sulfobutyl)-2(3H)-  
 benzothiazolylidene]methyl]-1-ethyl-6-methyl-, inner salt (9CI)  
 (CA INDEX NAME)



RN 41527-96-2 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[[4-hydroxy-3-(4-sulfobutyl)-2(3H)-  
 benzothiazolylidene]methyl]-6-methyl-, inner salt (9CI) (CA INDEX  
 NAME)



RN 41527-97-3 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[(3-ethyl-4-methoxy-2(3H)-  
 benzothiazolylidene)methyl]-6-methyl-, bromide (9CI) (CA INDEX  
 NAME)



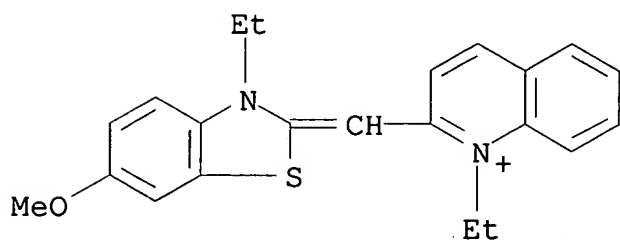
● Br<sup>-</sup>

RN 41527-98-4 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[(3-ethyl-6-methoxy-2(3H)-benzothiazolylidene)methyl]-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 48213-77-0

CMF C22 H23 N2 O S



CM 2

CRN 48028-76-8

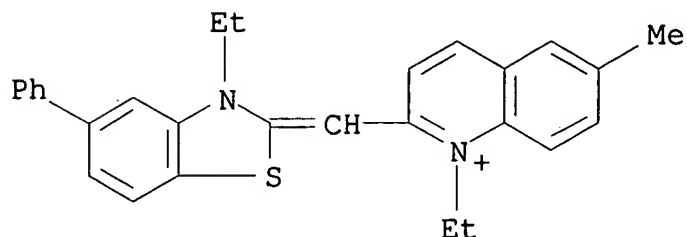
CMF C2 H5 O4 S

Et-O-SO<sub>3</sub><sup>-</sup>

RN 41528-00-1 HCAPLUS  
 CN Quinolinium, 1-ethyl-2-[3-ethyl-5-phenyl-2(3H)-

USHA SHRESTHA REM 4B28

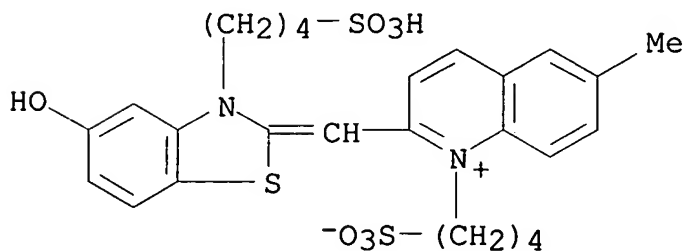
benzothiazolylidene)methyl]-6-methyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

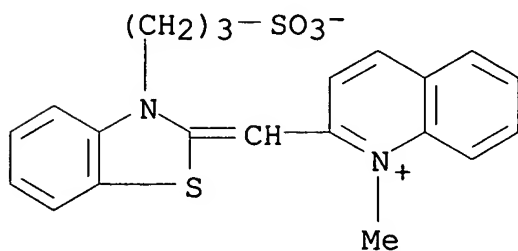
RN 41528-01-2 HCAPLUS

CN Quinolinium, 2-[[5-hydroxy-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-6-methyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



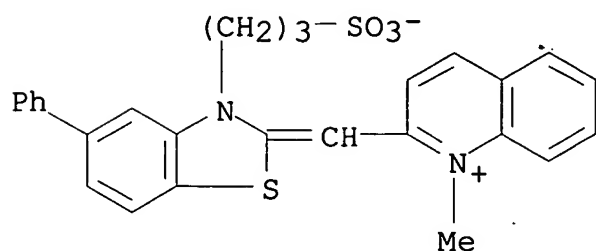
RN 41528-03-4 HCAPLUS

CN Quinolinium, 1-methyl-2-[[3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 41528-04-5 HCAPLUS

CN Quinolinium, 1-methyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



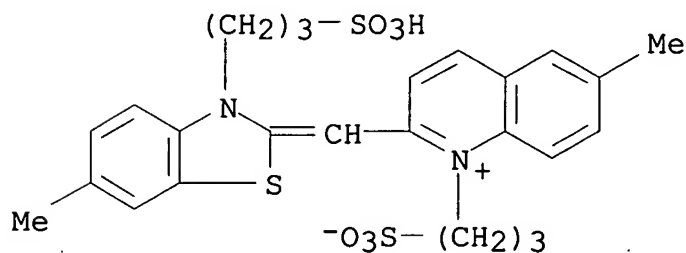
RN 41528-06-7 HCAPLUS

CN Quinolinium, 6-methyl-2-[[6-methyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 48232-99-1

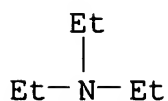
CMF C25 H28 N2 O6 S3



CM 2

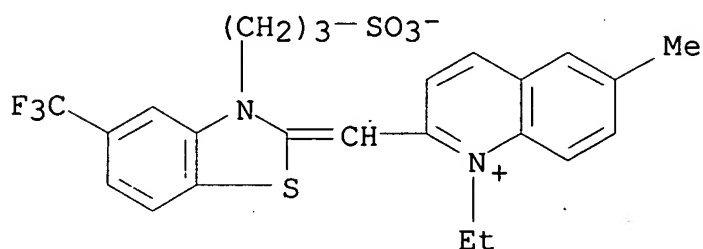
CRN 121-44-8

CMF C6 H15 N



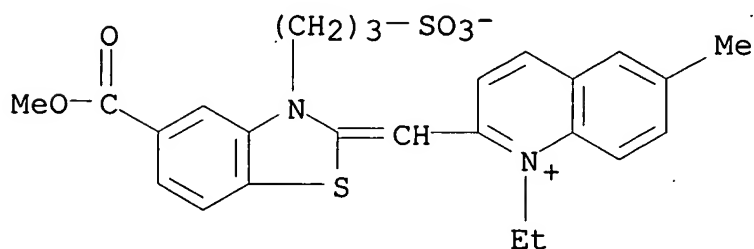
RN 41528-07-8 HCAPLUS

CN Quinolinium, 1-ethyl-6-methyl-2-[[3-(3-sulfopropyl)-5-(trifluoromethyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 41528-08-9 HCAPLUS

CN Quinolinium, 1-ethyl-2-[[5-(methoxycarbonyl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-6-methyl-, inner salt (9CI) (CA INDEX NAME)



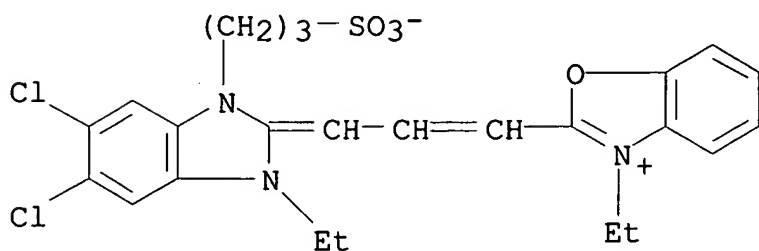
IT 19163-98-5 40703-12-6 41528-09-0  
 41528-10-3 41528-11-4 41528-12-5  
 41528-13-6 41528-14-7 41528-15-8  
 41528-16-9 41528-17-0 41528-18-1  
 41528-19-2 41528-20-5 41528-23-8  
 41528-24-9 41528-25-0 41528-26-1  
 41528-28-3

(photographic supersensitizers from thiapseudocyanine dyes and, for radiographic emulsions)



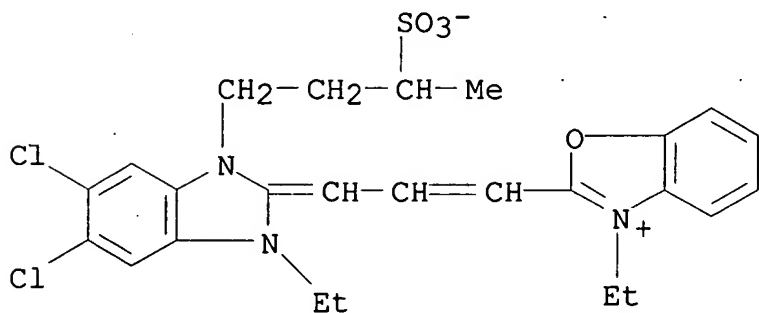
RN 19163-98-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



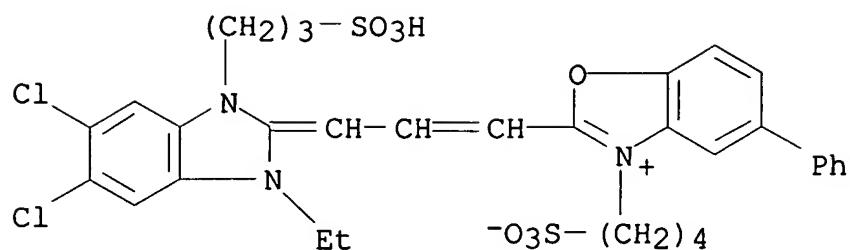
RN 40703-12-6 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



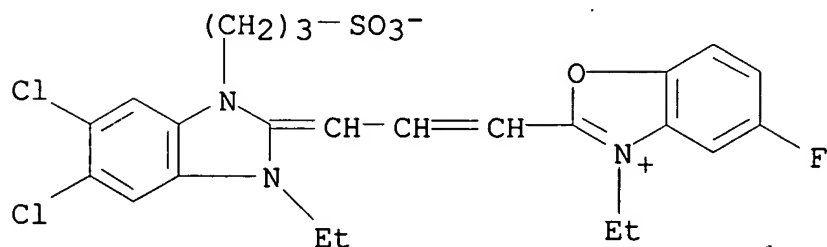
RN 41528-09-0 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

● Na<sup>+</sup>

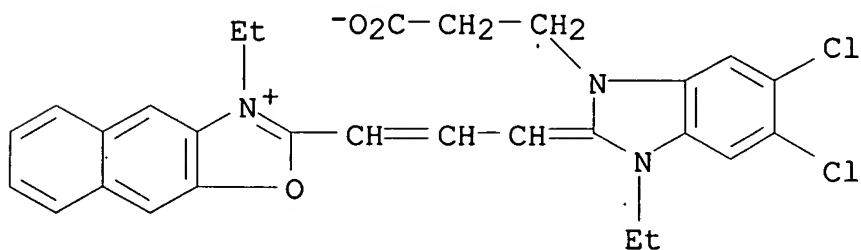
RN 41528-10-3 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-fluoro-, inner salt (9CI) (CA INDEX NAME)



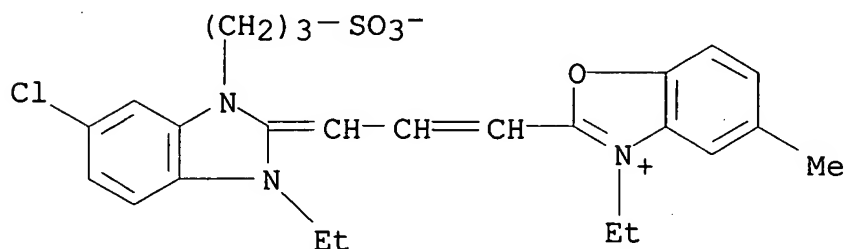
RN 41528-11-4 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[3-[1-(2-carboxyethyl)-5,6-dichloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



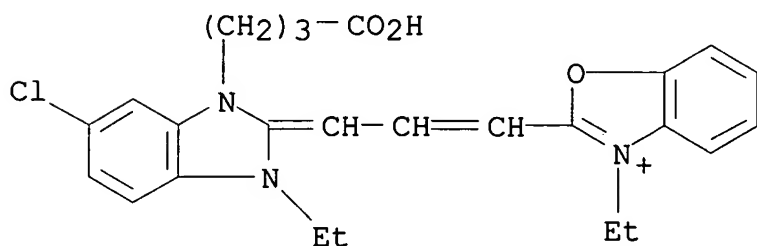
RN 41528-12-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methyl-, inner salt (9CI) (CA INDEX NAME)



RN 41528-13-6 HCAPLUS

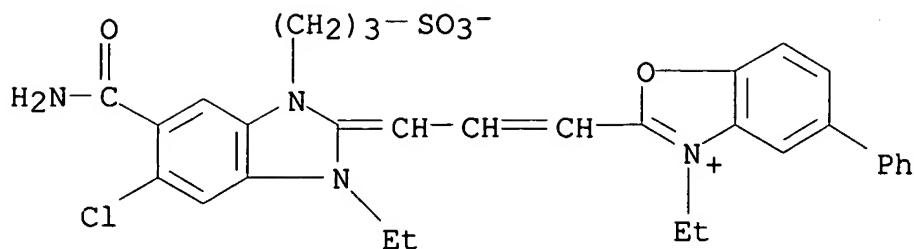
CN Benzoxazolium, 2-[3-[3-(3-carboxypropyl)-5-chloro-1-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME).



● I<sup>-</sup>

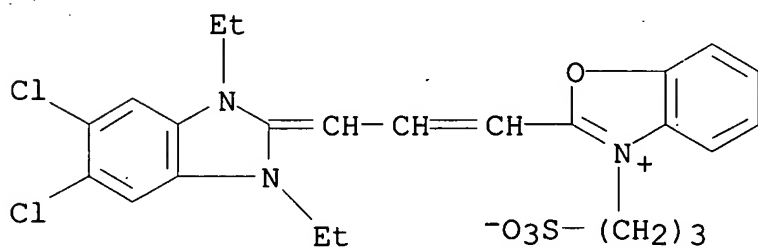
RN 41528-14-7 HCAPLUS

CN Benzoxazolium, 2-[3-[5-(aminocarbonyl)-6-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-phenyl-, inner salt (9CI) (CA INDEX NAME).



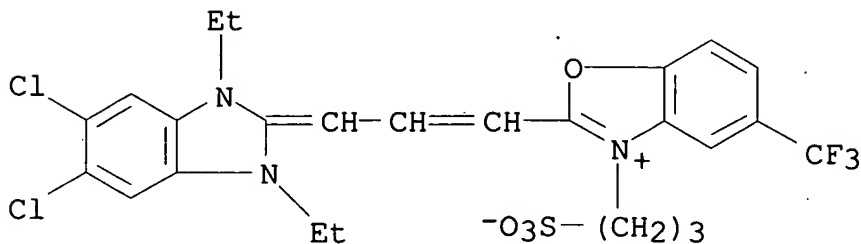
RN 41528-15-8 HCAPLUS

CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



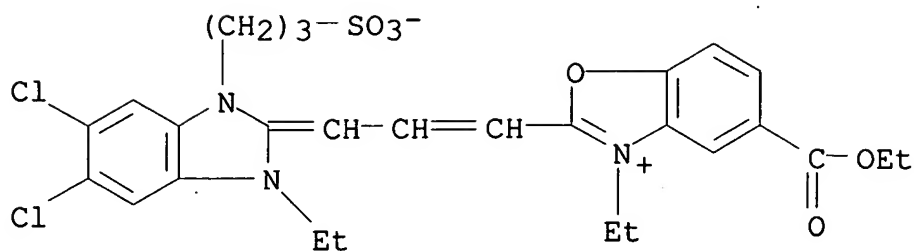
RN 41528-16-9 HCAPLUS

CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 41528-17-0 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-(ethoxycarbonyl)-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



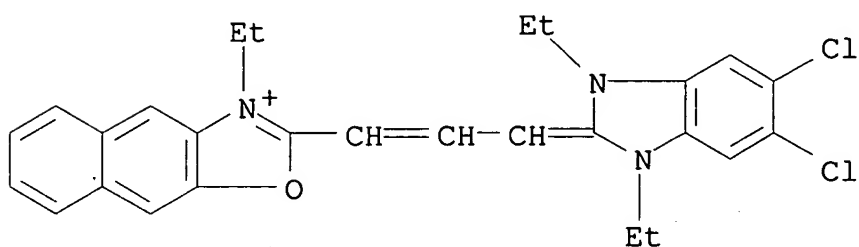
RN 41528-18-1 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 48229-23-8

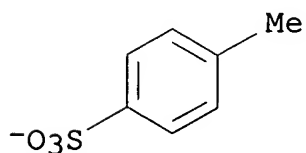
CMF C27 H26 Cl2 N3 O



CM 2

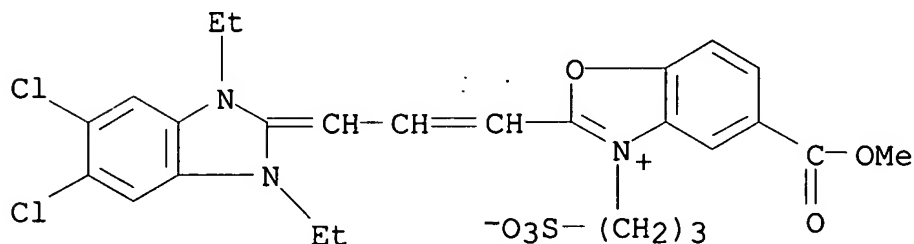
CRN 16722-51-3

CMF C7 H7 O3 S



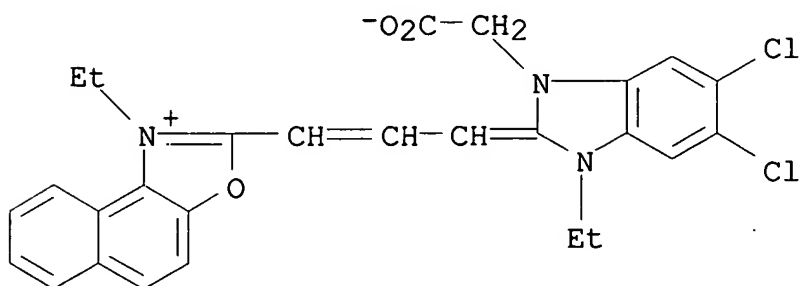
RN 41528-19-2 HCAPLUS

CN Benzoxazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-5-(methoxycarbonyl)-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 41528-20-5 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-[1-(carboxymethyl)-5,6-dichloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



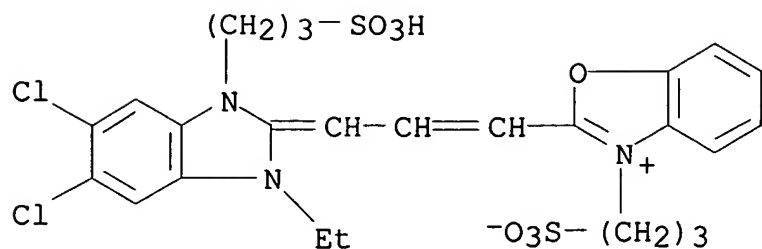
RN 41528-23-8 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 48236-39-1

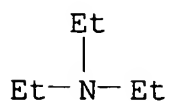
CMF C25 H27 Cl2 N3 O7 S2



CM 2

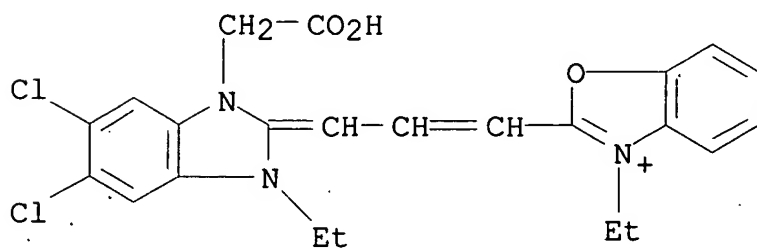
CRN 121-44-8

CMF C6 H15 N



RN 41528-24-9 HCAPLUS

CN Benzoxazolium, 2-[3-[1-(carboxymethyl)-5,6-dichloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, iodide  
(9CI) (CA INDEX NAME)

● I<sup>-</sup>

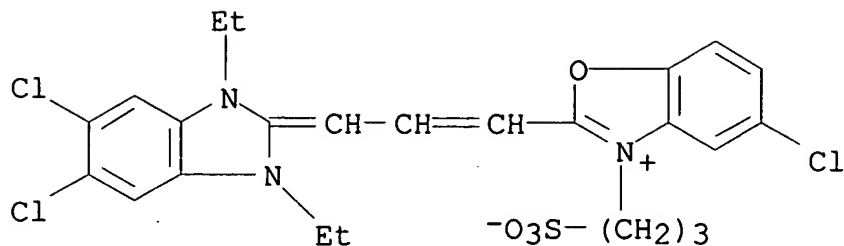
RN 41528-25-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-(3-sulfopropyl)-, inner

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REM 4B28

salt (9CI) (CA INDEX NAME)



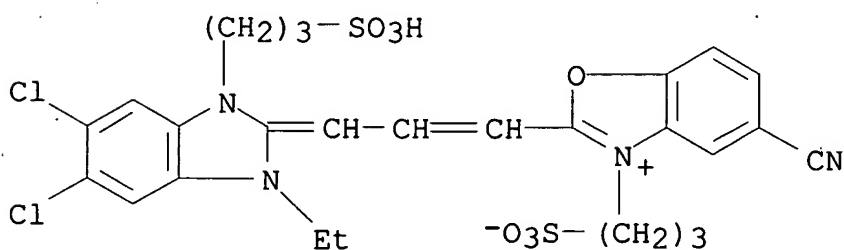
RN 41528-26-1 HCAPLUS

CN Benzoxazolium, 5-cyano-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 48238-01-3

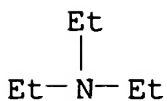
CMF C26 H26 Cl2 N4 O7 S2



CM 2

CRN 121-44-8

CMF C6 H15 N

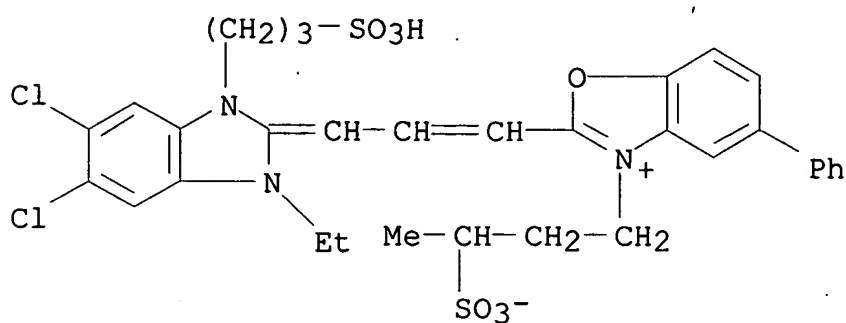


USHA SHRESTHA

REM 4B28



CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-phenyl-3-(3-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

IT	16025-99-3	27075-09-8	29268-85-7
	29268-92-6	39201-47-3	41527-92-8
	41527-95-1	41527-96-2	41527-97-3
	41527-98-4	41528-00-1	41528-01-2
	41528-03-4	41528-04-5	41528-06-7
	41528-07-8	41528-08-9	

IT 18957-59-0 19163-98-5 40703-12-6  
41528-09-0 41528-10-3 41528-11-4  
41528-12-5 41528-13-6 41528-14-7  
41528-15-8 41528-16-9 41528-17-0  
41528-18-1 41528-19-2 41528-20-5  
41528-23-8 41528-24-9 41528-25-0  
41528-26-1 41528-28-3

ACCESSION NUMBER: 1973:22515 HCAPLUS

USHA SHRESTHA      REM 4B28

DOCUMENT NUMBER: 78:22515  
 TITLE: **Green-sensitized**  
 photographic emulsions for flash exposures  
 INVENTOR(S): Shiba, Keisuke; Kubodera, Seiiti  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.  
 SOURCE: Ger. Offen., 44 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2202498	A	19720803	DE 1972-2202498	1972 0119
JP 52025732	B4	19770709	JP 1971-1320	1971 0119
GB 1389081	A	19750403	GB 1972-2664	1972 0119
CA 971801	A1	19750729	CA 1972-132741	1972 0119
US 3969116	A	19760713	US 1974-525036	1974 1118
PRIORITY APPLN. INFO.:			JP 1971-1320	A 1971 0119
			US 1972-219047	A1 1972 0119

GI For diagram(s), see printed CA Issue.  
 AB For exposures <0.001 sec (flash lamp, cathode ray tube, laser) emulsions with Ag halide grains <0.8  $\mu$  in size are sensitized with a Au salt, a Pt metal salt, a sensitizing dye, and a supersensitizer having an Eredn. = -0.71- -1.7 V. The latter, which may be colorless, has an Epoxidn. higher than (Epoxidn. = -0.5 V) that of the main dye, which may be a cyanine or a

merocyanine dye. Thus, using dyes in solns. of  $1 + 10^{-3}$  M concentration, the relative speed of a typical emulsion for exposure at 2

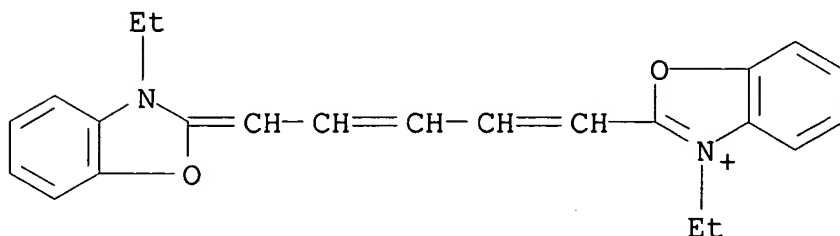
+  $10^{-6}$  sec when containing 32 ml of dye I (Eredn. = -1.036; Epoxidn. = -1.041 V) was increased from 100 to 480 by 16 ml of dye II (Eredn. = -1.47; Epoxidn. = -0.854 V).

IT 14806-50-9 23216-67-3 33628-03-4  
33904-84-6 36506-01-1 39201-42-8  
39201-43-9 39201-45-1 39201-47-3  
39201-48-4 39201-49-5 39755-77-6

(photographic supersensitizers from cyanine dyes and, for **green-sensitized** flash-exposed emulsions)

RN 14806-50-9 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[5-(3-ethyl-2(3H)-benzoxazolylidene)-1,3-pentadienyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

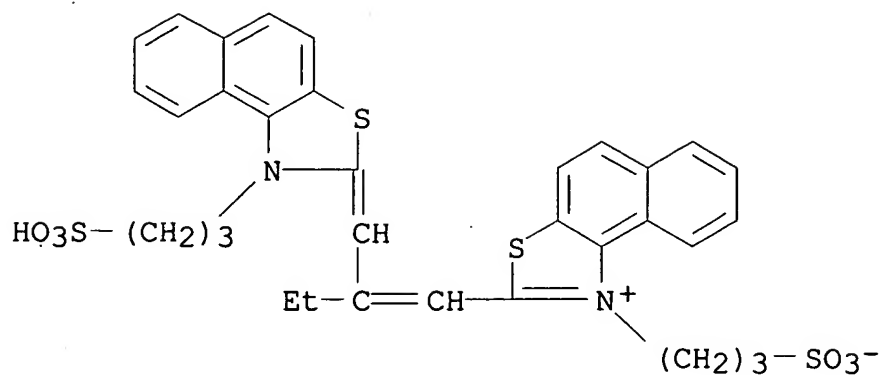
RN 23216-67-3 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 4622-66-6

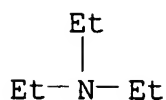
CMF C33 H32 N2 O6 S4



CM 2

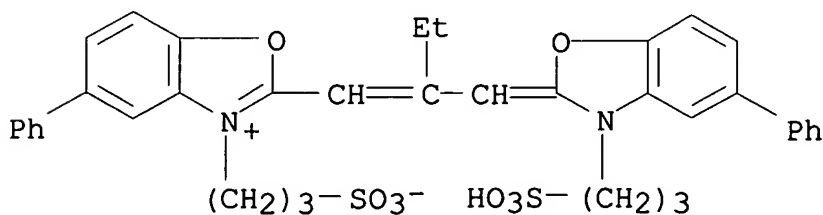
CRN 121-44-8

CMF C6 H15 N



RN 33628-03-4 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

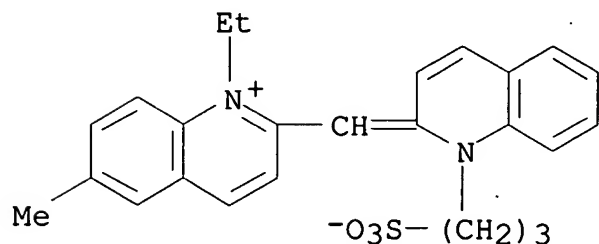


● Na

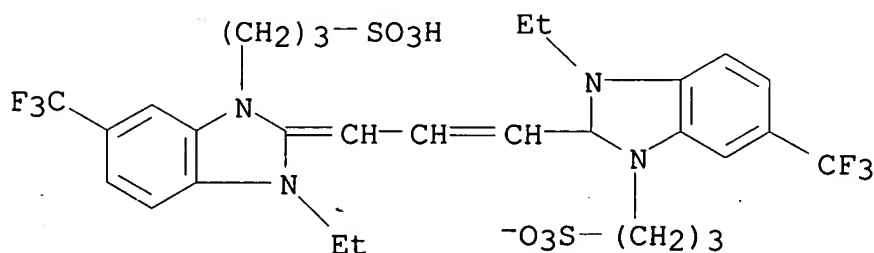
USHA SHRESTHA

REM 4B28

RN 33904-84-6 HCAPLUS  
 CN Quinolinium, 1-ethyl-6-methyl-2-[[1-(3-sulfopropyl)-2(1H)-quinolinylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 36506-01-1 HCAPLUS  
 CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

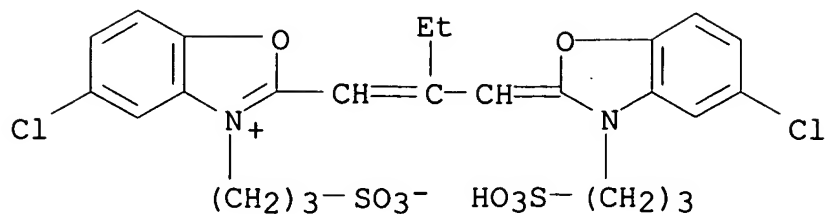
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 39201-42-8 HCAPLUS  
 CN Benzoxazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 6200-35-7

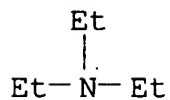
CMF C25 H26 Cl2 N2 O8 S2



CM 2

CRN 121-44-8

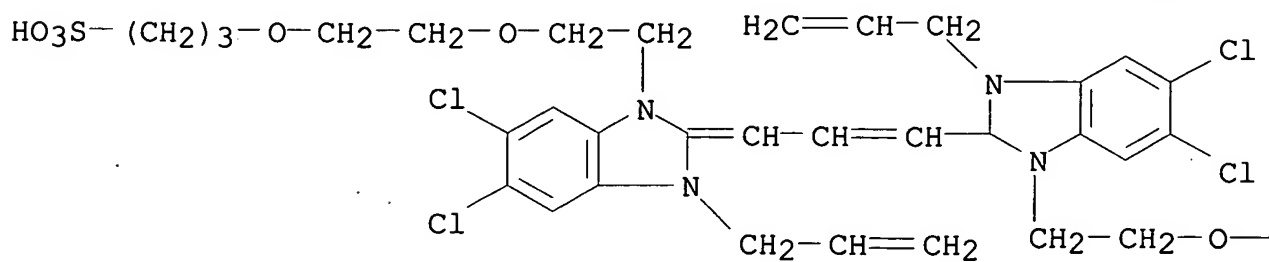
CMF C6 H15 N



RN 39201-43-9 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[5,6-dichloro-1,3-dihydro-1-(2-propenyl)-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-2H-benzimidazol-2-ylidene]-1-(2-propenyl)-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

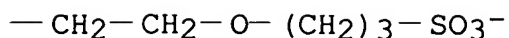


● Na

USHA SHRESTHA

REM 4B28

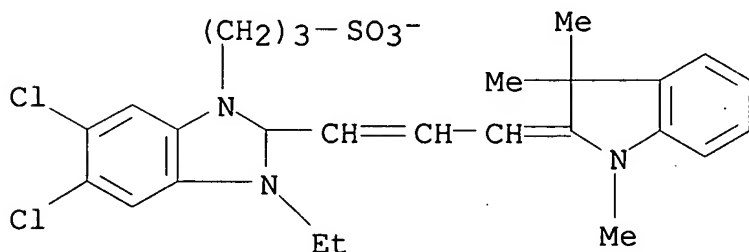
PAGE 1-B



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 39201-45-1 HCAPLUS

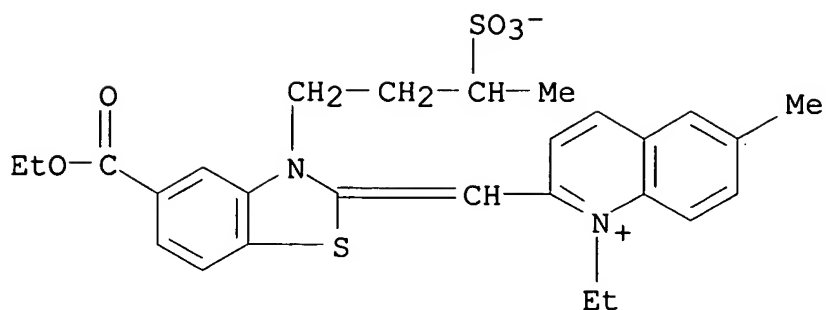
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 39201-47-3 HCAPLUS

CN Quinolinium, 2-[[5-(ethoxycarbonyl)-3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME)



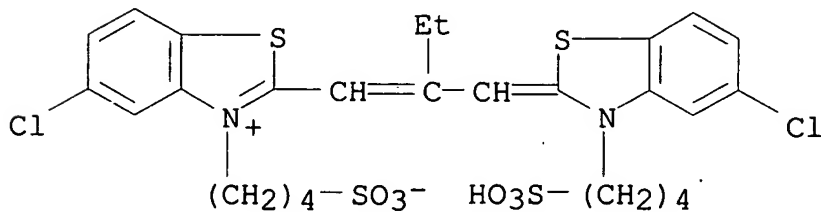
RN 39201-48-4 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 20904-74-9

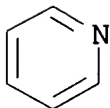
CMF C27 H30 Cl2 N2 O6 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



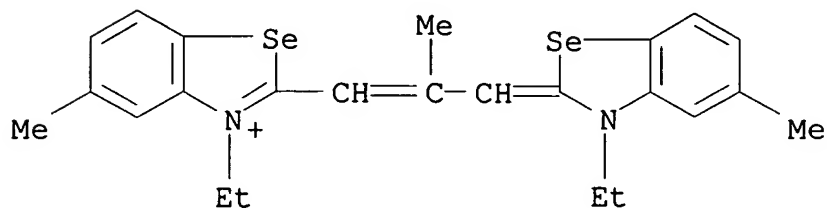
RN 39201-49-5 HCAPLUS

USHA SHRESTHA

REM 4B28



CN Benzoselenazolium, 3-ethyl-2-[3-(3-ethyl-5-methyl-2(3H)-benzoselenazolylydene)-2-methyl-1-propenyl]-5-methyl-, iodide (9CI) (CA INDEX NAME)



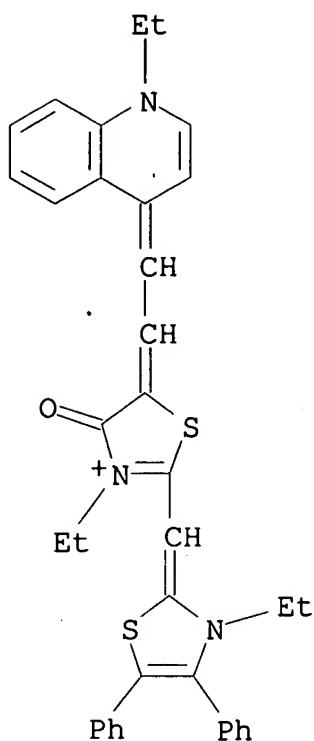
RN 39755-77-6 HCAPLUS

CN Thiazolium, 3-ethyl-2-[(3-ethyl-4,5-diphenyl-2(3H)-thiazolylydene)methyl]-5-[(1-ethyl-4(1H)-quinolinylidene)ethylidene]-4,5-dihydro-4-oxo-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 77837-27-5

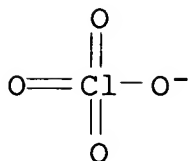
CMF C36 H34 N3 O S2



CM 2

CRN 14797-73-0

CMF Cl O4



IC G03C  
 CC 74-2 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)  
 ST emulsion photog flash exposure; **green sensitized**  
 photog emulsion; supersensitizer green photog emulsion  
 IT Photographic emulsions

USHA SHRESTHA REM 4B28

(**green-sensitized**, for flash exposures)  
 IT Photographic sensitizers  
 (super-, cyanine dye mixts. as, for **green-sensitized** flash-exposed emulsions)  
 IT 4193-55-9 4751-25-1 **14806-50-9 23216-67-3**  
**33628-03-4 33904-84-6 36506-01-1**  
 38595-49-2 **39201-42-8 39201-43-9**  
**39201-45-1 39201-47-3 39201-48-4**  
**39201-49-5 39201-54-2 39755-77-6**  
 (photographic supersensitizers from cyanine dyes and, for **green-sensitized** flash-exposed emulsions)

L29 ANSWER 66 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1972:558739 HCAPLUS  
 DOCUMENT NUMBER: 77:158739  
 TITLE: Spectrally sensitized silver halide  
 photographic emulsions  
 INVENTOR(S): Sakaguchi, Yoshikata; Saki, Masakado; Ohki,  
 Maasanaga; Nakamura, Yashunaru; Tsubota,  
 Motohiko; Sato, Akio  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.  
 SOURCE: Brit., 9 pp. Division of Brit. 1,280,016.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
GB 1280017		19720705 /	GB 1971-18198	1971 0312

GI For diagram(s), see printed CA Issue.  
 AB Division of Brit. 1,280,016. High spectral sensitization of Ag  
 halide emulsions in the range 620-645 nm without a decrease in  
 total sensitivity or formation of stain after development is  
 obtained with a combination of carbocyanine sensitizing dyes (I;  
 Z, Z1 = S, Se; R = Et, Pr, Bu, allyl; R1 = 3-sulfopropyl,  
 3-sulfobutyl, 4-sulfobutyl, 4-carboxybutyl, or 5-carboxypentyl; X  
 = anion; and n = 1 or in the case of an intramol. salt 0) and  
**green-sensitizing** dye (II; Y1, Y2 = the atoms  
 necessary to complete a 2-quinolyl, benzothiazole,  
 benzoselenazole, or naphthothiazole nucleus; R3, R4 = allyl,

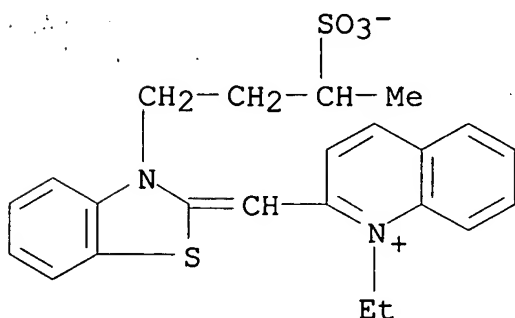
alkyl, carboxyalkyl, sulfoalkyl or aralkyl; X = an anion; and n = 1 or in the case of an intramol. salt 0, e.g. III, IV). Thus, a Ag(Br, I) gelatin emulsion (7 mole % AgI) containing 0.053, 0.015, and 0.015 mmole/kg emulsion, resp., of I (Z, Z1 = S, R = Et, R1 = (CH<sub>2</sub>)<sub>4</sub>SO<sub>3</sub><sup>-</sup>) (V), III, and IV had a sensitization maximum of 628 nm and a red sensitivity of 100 vs. 628 and 100 for a control emulsion containing only V.

IT 29637-13-6 34935-36-9 38650-20-3  
38650-21-4 38650-22-5 38650-23-6  
38758-91-7

(photog. sensitizers from carbocyanine dyes and)

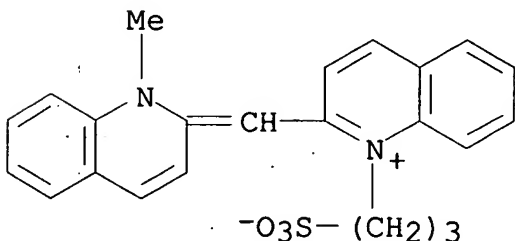
RN 29637-13-6 HCAPLUS

CN Quinolinium, 1-ethyl-2-[[3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



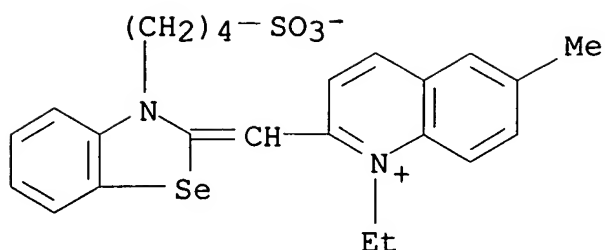
RN 34935-36-9 HCAPLUS

CN Quinolinium, 2-[(1-methyl-2(1H)-quinolinylylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



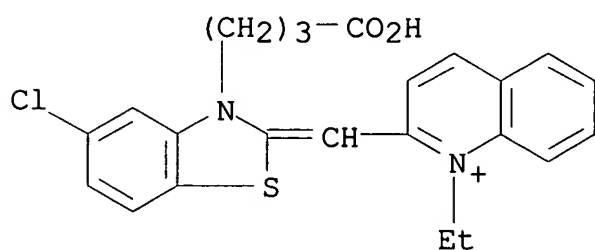
RN 38650-20-3 HCAPLUS

CN Quinolinium, 1-ethyl-6-methyl-2-[[3-(4-sulfobutyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 38650-21-4 HCAPLUS

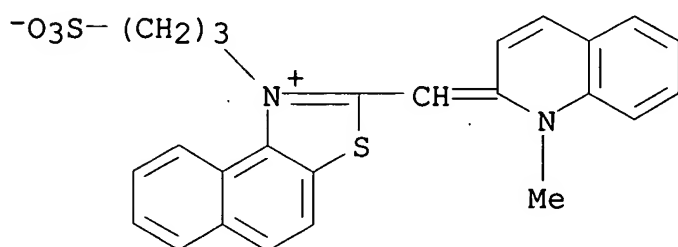
CN Quinolinium, 2-[[3-(3-carboxypropyl)-5-chloro-2(3H)-benzothiazolylidene)methyl]-1-ethyl-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 38650-22-5 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[(1-methyl-2(1H)-quinolinylidene)methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

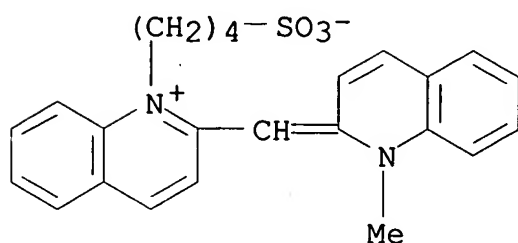


USHA SHRESTHA

REM 4B28

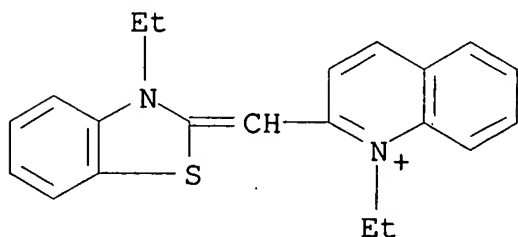
RN 38650-23-6 HCAPLUS

CN Quinolinium, 2-[(1-methyl-2(1H)-quinolinylidene)methyl]-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 38758-91-7 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-, bromide (9CI) (CA INDEX NAME)



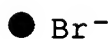
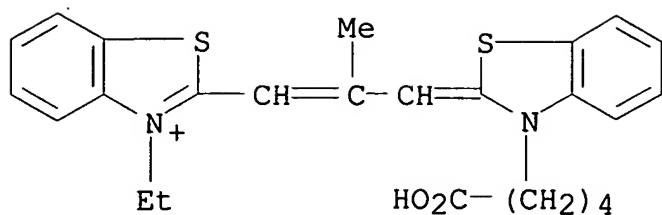
● Br<sup>-</sup>

IT 28789-10-8 30457-66-0

(photog. sensitizers from monomethine cyanine dyes and)

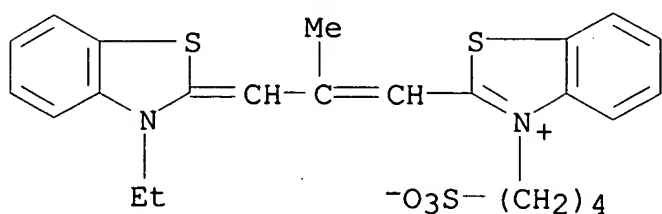
RN 28789-10-8 HCAPLUS

CN Benzothiazolium, 2-[3-[3-(4-carboxybutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-ethyl-, bromide (9CI) (CA INDEX NAME)



RN 30457-66-0 HCAPLUS

CN Benzothiazolium, 2-[3-(3-ethyl-2(3H)-benzothiazolylidene)-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



IC G03C

CC 74-2 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)

IT **29637-13-6 34935-36-9 38650-20-3**  
**38650-21-4 38650-22-5 38650-23-6**  
**38758-91-7**

(photog. sensitizers from carbocyanine dyes and)

IT **28789-10-8 30457-66-0**

(photog. sensitizers from monomethine cyanine dyes and)

L29 ANSWER 67 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1972:106426 HCAPLUS

DOCUMENT NUMBER: 76:106426

TITLE: Sensitizing combinations for photographic gelatin-silver halide emulsions

INVENTOR(S): Shiba, Keisuke; Sato, Akira; Ogawa, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.

SOURCE: Ger. Offen., 31 pp.

USHA SHRESTHA

REM 4B28

DOCUMENT TYPE: CODEN: GWXXBX  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: German  
 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2121780	A	19711125	DE 1971-2121780	1971 0503
JP 48041203	B4	19731205	JP 1970-37394	1970 0501
FR 2091018	A5	19720114	FR 1971-15632	1971 0430
CA 978011	A1	19751118	CA 1971-111817	1971 0430
GB 1344281	A	19740116	GB 1971-12772	1971 0503
PRIORITY APPLN. INFO.:			JP 1970-37394	A 1970 0501

GI For diagram(s), see printed CA Issue.

AB Emulsions are supersensitized by the addition of a combination of sensitizing dyes I and II, where R1, R2, and R3 are lower alkyl groups of which  $\geq 1$  is substituted by a sulfo group; R4 is H or forms an alkylene bond with R2; Z1 is a group completing a benzimidazole ring; A1, A2 are H, Ph, halogen, CO2H, alkoxy, CO, alkyl, alkoxy, OH, CF3, CN, or A2 condenses with A1 or A3 to form a benzene ring; A3 is H or alkyl, whereby  $\geq 1$  of A1, A2, or A3 is a benzene ring substituent if R2 and R3 are bridged into an alkylene group and Z1 is substituted by the same halogen atoms; R4, R6, R7, and R8 have the same significance as R1, R2 or R3 and in which  $\geq 1$  residue is an alkyl group substituted with sulfo or carboxyl groups, Z2 and Z3 are groups essential for formation of the benzimidazole rings, X- is an acid anion, and n = 1 or 2 and has the value 1 when an intramol. salt is formed. Thus, a Ag(Br, I) emulsion (4 mole I) containing 160 ml/kg 1 + 10<sup>-3</sup> M I (A1 = Me, A2 = Cl, A3 = R4 = H, R1 = (CH2)3SO3-, R2 =



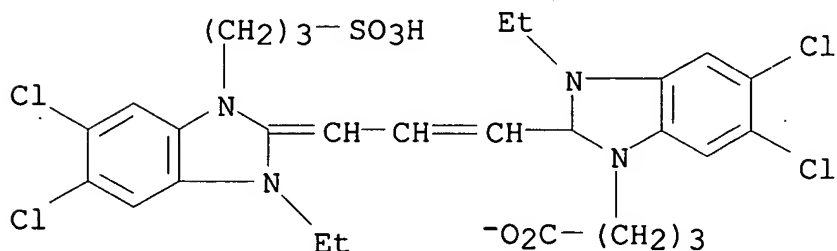
CH<sub>2</sub>CH<sub>2</sub>OH, R<sub>3</sub> = Et, Z<sub>1</sub> = CH:CClCCl:CH) (III) and 40 ml/kg 5 + 10<sup>-4</sup> M II (R<sub>5</sub> = (CH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>C<sub>3</sub>H<sub>8</sub>SO<sub>3</sub><sup>-</sup>, R<sub>6</sub> = R<sub>8</sub> = Et, R<sub>7</sub> = (CH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>C<sub>3</sub>H<sub>8</sub>SO<sub>3</sub>H·N Et<sub>3</sub>, Z<sub>2</sub> = Z<sub>3</sub> = CH:CClCCl:CH) (IV) had a relative **green sensitivity** of 225 and a fog level of 0.12, compared to 112 and 0.14 for an emulsion containing only 160 ml/kg III and 100 and 0.14 for an emulsion containing only 40 ml/kg of the IV solution

IT 25968-68-7 29708-48-3 36505-99-4  
36506-01-1 36506-02-2

(photographic supersensitizers from  
benzimidazoleoxacarbocyanine dyes and)

RN 25968-68-7 HCAPLUS

CN 1H-Benzimidazolium, 1-(3-carboxypropyl)-5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 29708-48-3 HCAPLUS

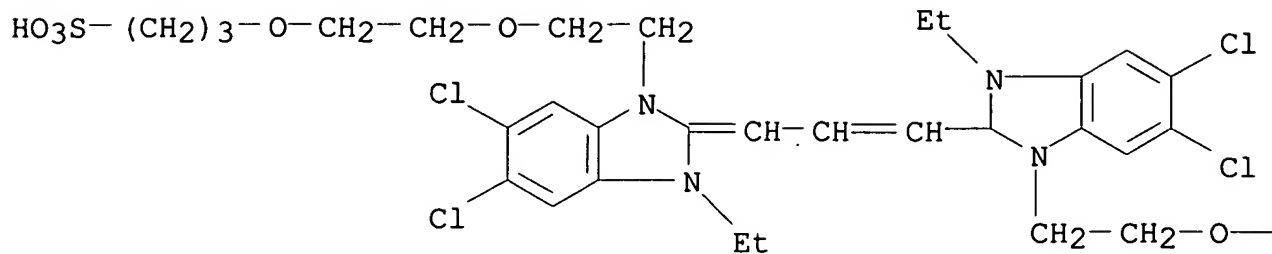
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-[2-[2-(3-sulfopropoxy)ethoxy]ethyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

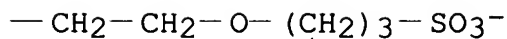
CRN 16242-93-6

CMF C35 H46 Cl4 N4 O10 S2

PAGE 1-A



PAGE 1-B

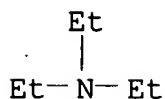


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 121-44-8

CMF C6 H15 N

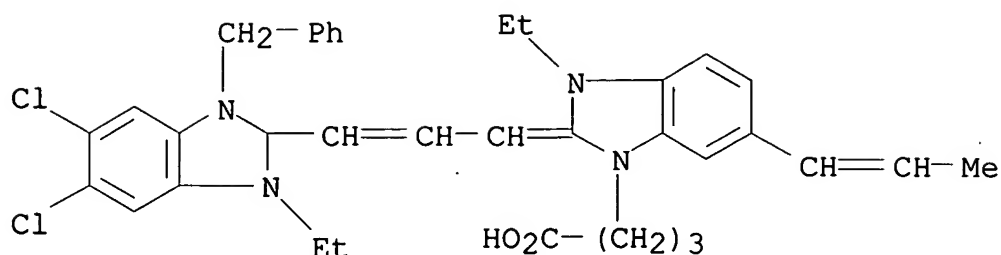


RN 36505-99-4 HCAPLUS

CN 1H-Benzimidazolium, 2-[3-[3-(3-carboxypropyl)-1-ethyl-1,3-dihydro-5-(1-propenyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5,6-dichloro-1-ethyl-3-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

USHA SHRESTHA

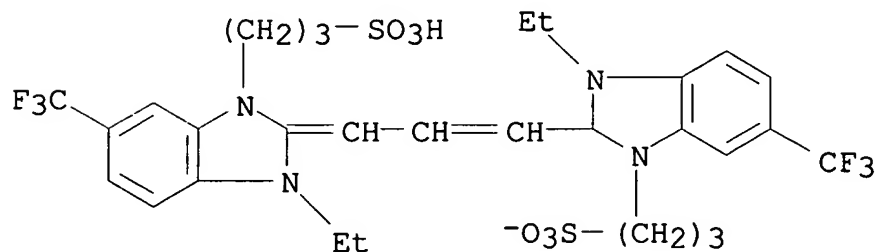
REM 4B28

● Br<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 36506-01-1 HCAPLUS

CN 1H-Benzimidazolium, 1-ethyl-2-[3-[1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

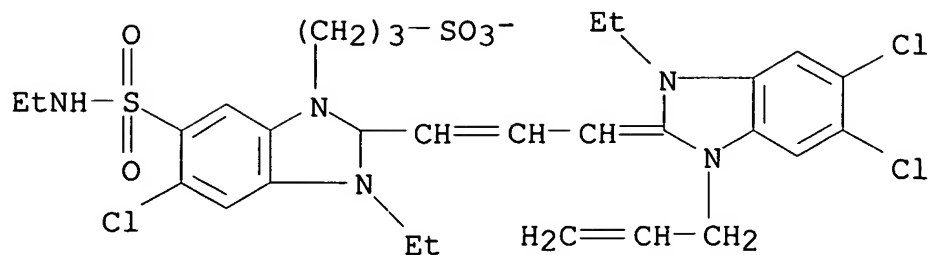


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 36506-02-2 HCAPLUS

CN 1H-Benzimidazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(2-propenyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-6-[(ethylamino)sulfonyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IT 36505-89-2 36505-90-5 36505-91-6

36505-92-7 36505-93-8 36505-94-9

36505-95-0 36505-96-1 36505-97-2

36505-98-3 36536-15-9 36536-16-0

(photographic supersensitizers from imidazolecarbocyanine dyes and)

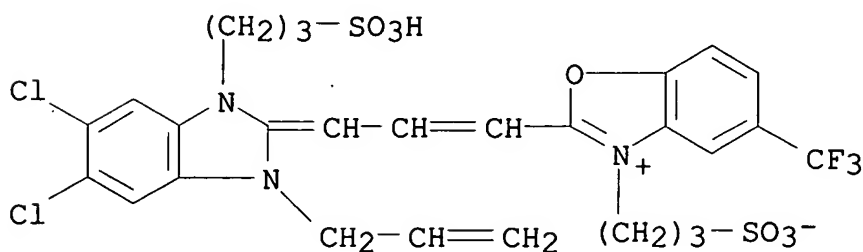
RN 36505-89-2 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1,3-dihydro-1-(2-propenyl)-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-5-(trifluoromethyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47851-73-0

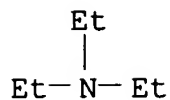
CMF C27 H26 Cl2 F3 N3 O7 S2



CM 2

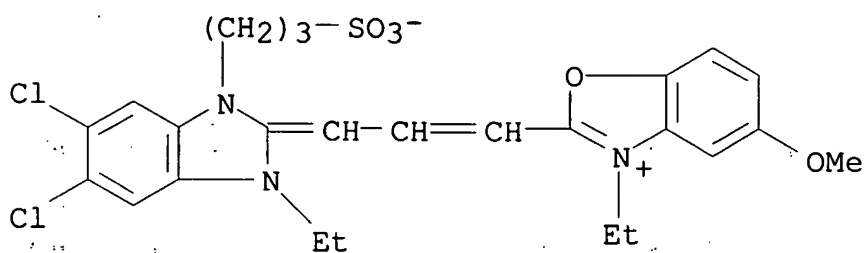
CRN 121-44-8

CMF C6 H15 N



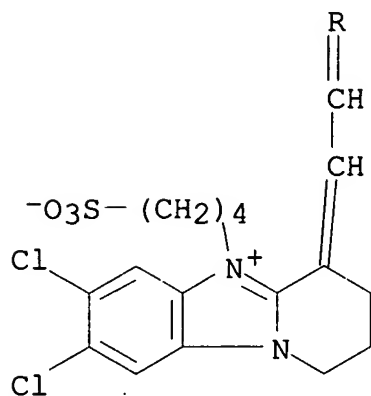
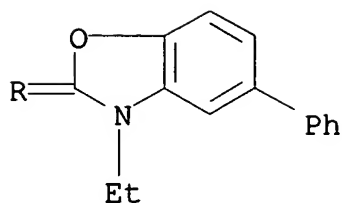
RN 36505-90-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methoxy-, inner salt (9CI) (CA INDEX NAME)



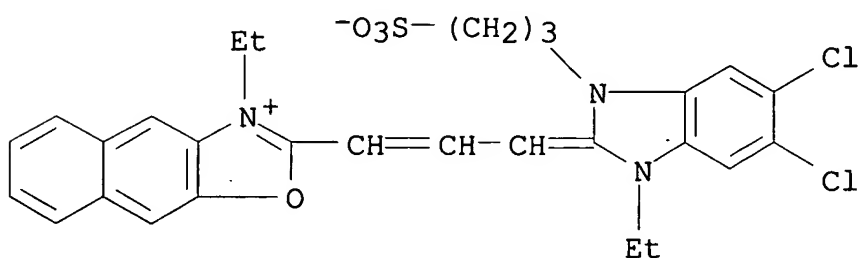
RN 36505-91-6 HCAPLUS

CN Pyrido[1,2-a]benzimidazolium, 7,8-dichloro-4-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)ethylidene]-1,2,3,4-tetrahydro-5-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



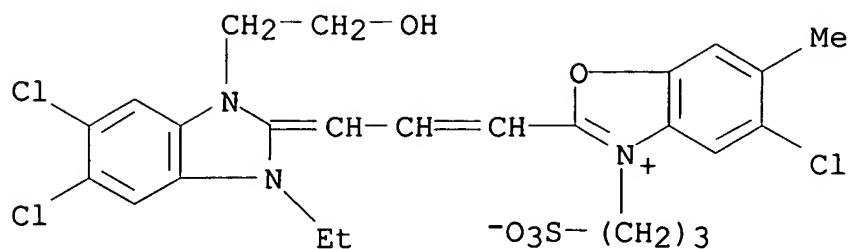
RN 36505-92-7 HCAPLUS

CN Naphth[2,3-d]oxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



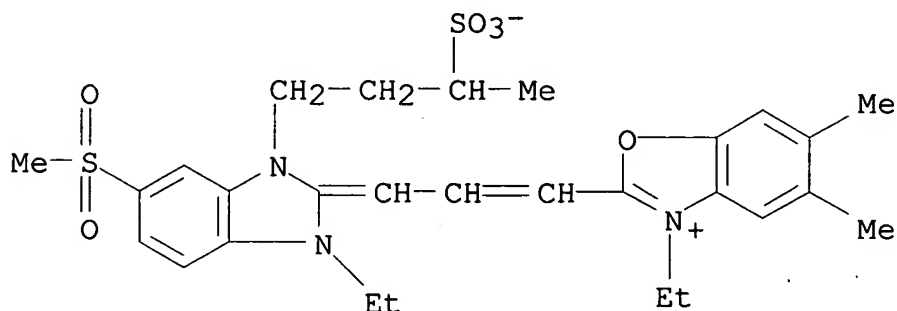
RN 36505-93-8 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(2-hydroxyethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



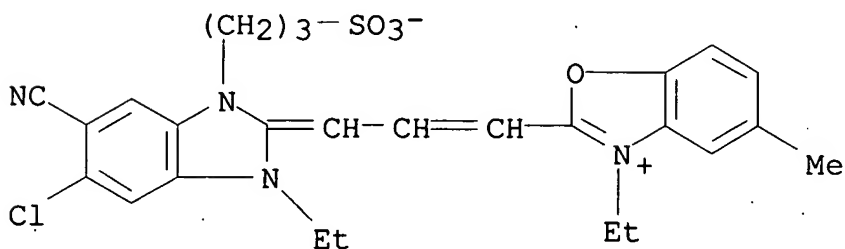
RN 36505-94-9 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[3-[1-ethyl-1,3-dihydro-5-(methylsulfonyl)-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5,6-dimethyl-, inner salt (9CI) (CA INDEX NAME)



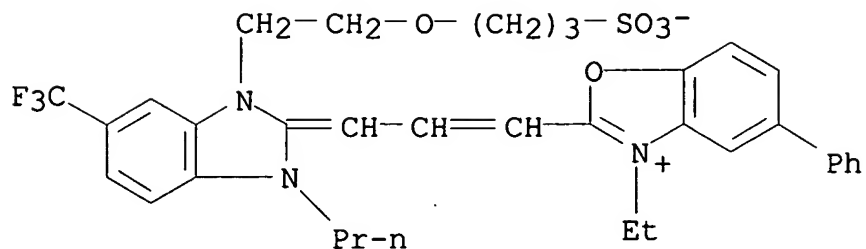
RN 36505-95-0 HCAPLUS

CN Benzoxazolium, 2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-methyl-, inner salt (9CI) (CA INDEX NAME)



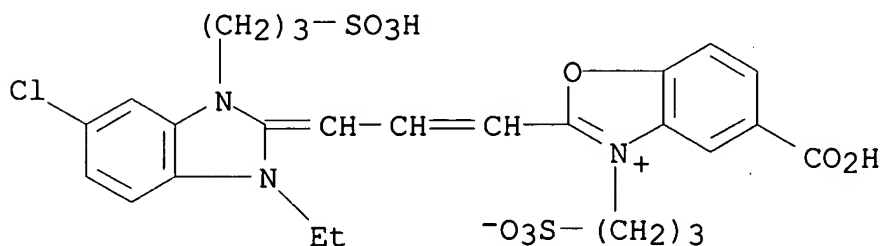
RN 36505-96-1 HCAPLUS

CN Benzoxazolium, 2-[3-[1,3-dihydro-1-propyl-3-[2-(3-sulfopropoxy)ethyl]-5-(trifluoromethyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-5-phenyl-, inner salt (9CI) (CA INDEX NAME)



RN 36505-97-2 HCAPLUS

CN Benzoxazolium, 5-carboxy-2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-(3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

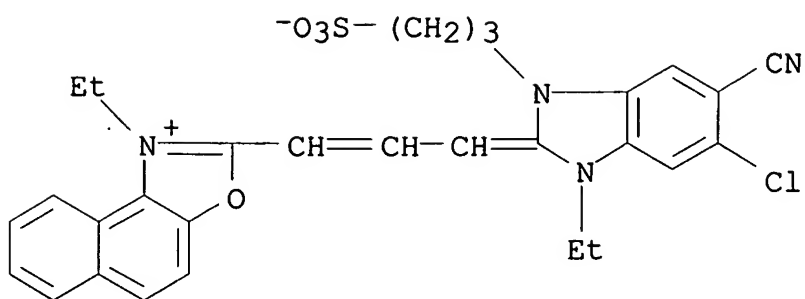


● Na

RN 36505-98-3 HCAPLUS

CN Naphth[1,2-d]oxazolium, 2-[3-[5-chloro-6-cyano-3-ethyl-1,3-dihydro-1-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)





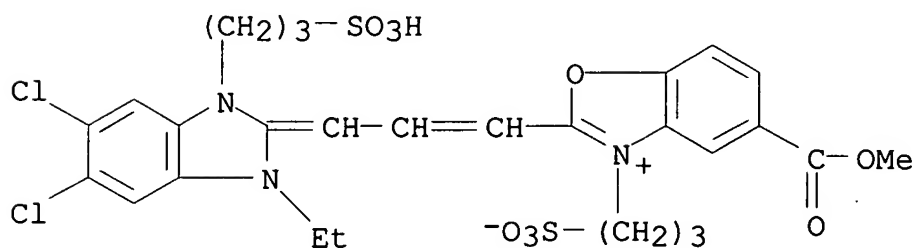
RN 36536-15-9 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-(methoxycarbonyl)-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47845-48-7

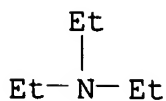
CMF C27 H29 Cl2 N3 O9 S2



CM 2

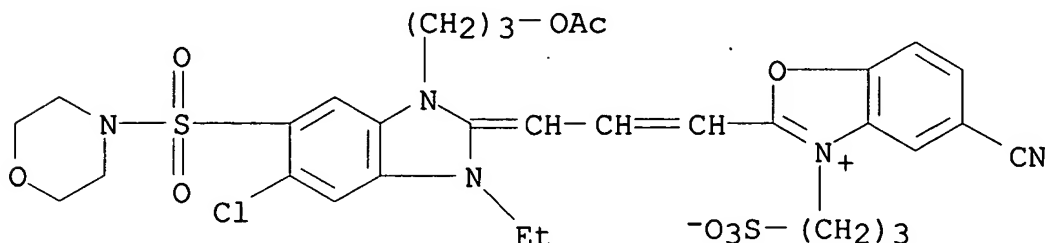
CRN 121-44-8

CMF C6 H15 N



RN 36536-16-0 HCAPLUS

CN Benzoxazolium, 2-[3-[1-[3-(acetyloxy)propyl]-5-chloro-3-ethyl-1,3-dihydro-6-(4-morpholinylsulfonyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-cyano-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC G03C

CC 74 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)

IT 25968-68-7 29708-48-3 36505-99-4  
36506-01-1 36506-02-2

(photographic supersensitizers from  
benzimidazoleoxacarbocyanine dyes and)

IT 36505-89-2 36505-90-5 36505-91-6  
36505-92-7 36505-93-8 36505-94-9  
36505-95-0 36505-96-1 36505-97-2  
36505-98-3 36536-15-9 36536-16-0

(photographic supersensitizers from imidazolecarbocyanine dyes  
and)

L29 ANSWER 68 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1971:443126 HCAPLUS

DOCUMENT NUMBER: 75:43126

TITLE: Photographic supersensitizing combination

INVENTOR(S): Ficken, Geoffrey E.; Squire, Elaine J.; Fry,  
Douglas J.

PATENT ASSIGNEE(S): Ilford Ltd.

SOURCE: Brit., 5 pp.  
CODEN: BRXXAA

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

USHA SHRESTHA

REM 4B28

GB 1223298

19710224 / GB

1968

0703

GI For diagram(s), see printed CA Issue.

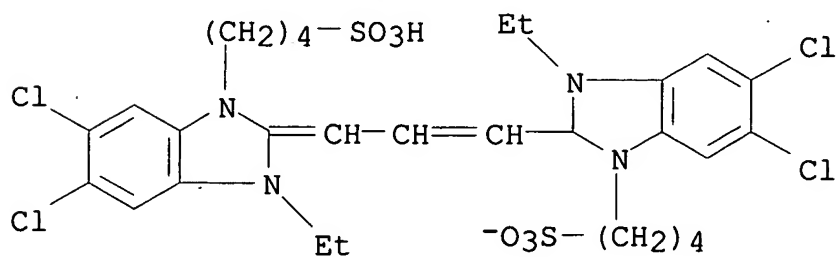
AB Combinations of I, where R1 is alkyl or sulfoalkyl, R2 is alkyl or alkoxy, R3 is H or alkyl, R5 is SO<sub>3</sub>H or CO<sub>2</sub>H, Y is S or Se, Z is an alkylene chain up to C<sub>6</sub>, and X is an anion, with II, where R4 is an alkyl group and M is H<sup>+</sup> or a cation, supersensitize Ag halide emulsions and at 0.01-0.3 g/1.5 g mole Ag halide increase **green sensitivity** while suppressing the red sensitivity imparted by II alone. Thus, anhydro[5-methyl(3-sulfopropyl)-2-benzoselenazole] (1-ethyl-6-methoxy-2-quinoline)methinecyanine hydroxide (III) and anhydrobis[5,6-dichloro-1-ethyl-3,4-sulfobutyl]-2-benzimidazole]trimethinecyanine hydroxide, Na salt (IV) were added to a high speed Ag(Br,I) emulsion each at 0.05 g/1.5 g mole Ag halide. The relative log speeds to green and red light (Ilford 404 and 204 filters) were 4.54 and 3.20 compared to 4.37 and 0 for 0.1 g III alone and 4.36 and 3.48 for 0.1 g IV alone.

IT **18462-64-1 33686-06-5 33904-59-5**

(photographic supersensitizers from cyanine dyes and)

RN 18462-64-1 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

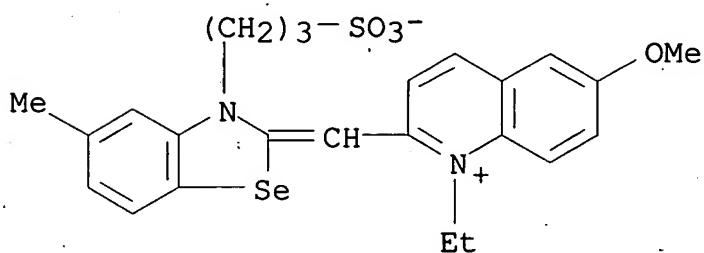
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

USHA SHRESTHA

REM 4B28

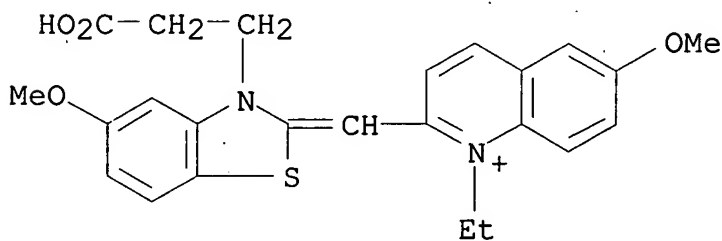
RN 33686-06-5 HCAPLUS

CN Quinolinium, 1-ethyl-6-methoxy-2-[[5-methyl-3-(3-sulfopropyl)-2(3H)-benzoselenazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 33904-59-5 HCAPLUS

CN Quinolinium, 2-[[3-(2-carboxyethyl)-5-methoxy-2(3H)-benzothiazolylidene]methyl]-1-ethyl-6-methoxy-, bromide (9CI) (CA INDEX NAME)

● Br<sup>-</sup>

IC G03C

CC 74 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)IT **18462-64-1** 29238-74-2 **33686-06-5**  
**33904-59-5**

(photographic supersensitizers from cyanine dyes and)

L29 ANSWER 69 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1971:59344 HCAPLUS

DOCUMENT NUMBER: 74:59344

TITLE: Photographic emulsion sensitive to the green

USHA SHRESTHA REM 4B28

INVENTOR(S): spectrum region  
 Sturm, Jaromir; Hrdlicka, Jaroslav  
 SOURCE: Czech., 3 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CS 133694		19691015	CS	1967 1227

GI For diagram(s), see printed CA Issue.

AB Emulsions, useful for black-and-white and color films, are sensitized with a complex compound of I and II which increases markedly the sensitivity in the region 500-40 nm (R can be alkyl, alkenyl, etc.; R2 is alkyl; R3 is H or alkyl; R4 and R5 are sulfoalkyl, carboxyalkyl, etc.; R6 and R7 are alkyl, aryl, etc.; R8 is alkyl; Y is the nonmetal atoms closing a quinoline, pyridine, thiazole, or benzo- or naphthothiazole). The complex is obtained by boiling equimolar amts. of both components in a concentrated

solution in 80% aqueous MeOH and separating the dye by dropwise addition of

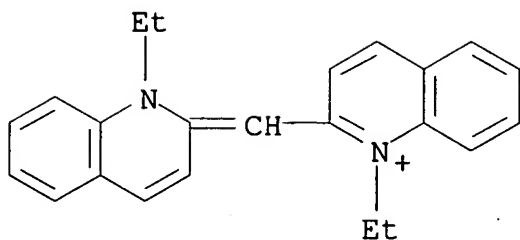
water. E.g., a Ag(Br, I) emulsion containing 1,1'-diethyl-2,2'-cyanine iodide (III), 2-(p-dimethylamino)styrylbenzothiazole, and a complex of III with anhydro-3,3'-bis(8-sulfobutyl)-5,5'-diphenyl-9-ethyloxa-carbocyanine hydroxide, had 2 sensitization maximum, at 545 and 575 nm, being sensitive in the spectral region at 500-40 nm which was not observed in an emulsion containing III only.

IT **977-96-8**

(photographic supersensitizers from carbocyanine dyes and)

RN 977-96-8 HCAPLUS

CN Quinolinium, 1-ethyl-2-[(1-ethyl-2(1H)-quinolinylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



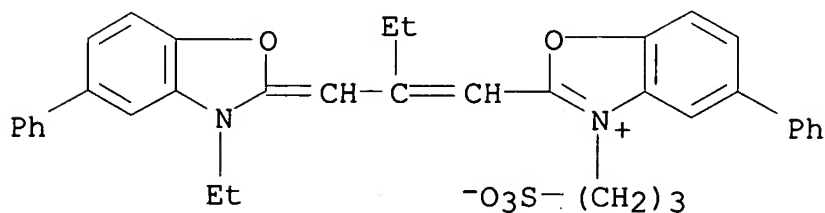
● I<sup>-</sup>

IT 5084-07-1 23368-58-3 28118-15-2

(photographic supersensitizers from diethylcyanine iodide and)

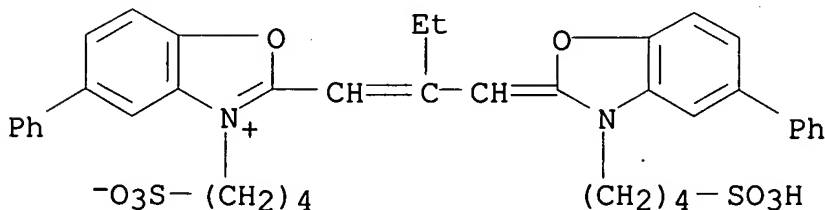
RN 5084-07-1 HCAPLUS

CN Benzoxazolium, 2-[2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



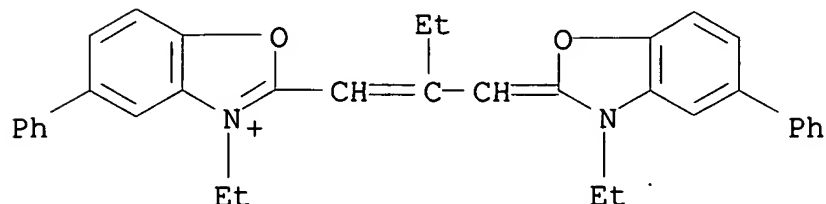
RN 23368-58-3 HCAPLUS

CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(4-sulfobutyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 28118-15-2 HCAPLUS

CN Benzoxazolium, 3-ethyl-2-[2-[(3-ethyl-5-phenyl-2(3H)-benzoxazolylidene)methyl]-1-butenyl]-5-phenyl-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

IC G03C  
 CC 74 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)  
 ST **green sensitive** emulsions; emulsions  
**green sensitive; sensitizers**  
**green sensitive** emulsions  
 IT **977-96-8**  
 (photographic supersensitizers from carbocyanine dyes and)  
 IT **5084-07-1 23368-58-3 28118-15-2**  
 (photographic supersensitizers from diethylcyanine iodide and)

L29 ANSWER 70 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1970:440461 HCAPLUS  
 DOCUMENT NUMBER: 73:40461  
 TITLE: Multilayer photographic film  
 INVENTOR(S): Schwan, Judith A.; Graham, James L.  
 PATENT ASSIGNEE(S): Eastman Kodak Co.  
 SOURCE: Ger. Offen., 132 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28

DE 1914292	A	19691009	DE 1969-1914292	1969 0320
BE 729204	A	19690828	BE 1969-729204	1969 0228
FR 2004376	A5	19691121	FR 1969-7623	1969 0318
FR 2004376	B1	19740614		
CH 512088	A	19710831	CH 1969-512088	1969 0318
GB 1252066	A	19711103	GB 1969-1252066	1969 0321
SU 398061	D	19730917	SU 1969-1313396	1969 0321
JP 49006207	B4	19740213	JP 1969-21549	1969 0322
PRIORITY APPLN. INFO.:		US 1968-715005	A	1968 0321

AB The color reproduction of Ag halide emulsion film on exposure to day, W, or fluorescent light is improved by using blue-, green-, and red-sensitive emulsions that show practically theoretical sensitivity curves for wavelengths >450, 545 and 610 nm, resp., and whose sensitivity to wavelengths <450, 545, and 610 nm is decreased by application of suitable filter layers. Thus, cellulose acetate film was coated successively with (1) a red-sensitive emulsion containing Ag(I,Br), anhydro-5,6-dichloro-1-ethyl-3-(3-sulfobutyl)-3'-(3-sulfopropyl)-4',5'-benzobenzimidazolothiocarbocyanine hydroxide, anhydro-9-ethyl-3-methyl-5-phenyl-3'-(3-sulfobutyl)oxoselenocarbocyanine hydroxide, and anhydro-3,3'-bis(2-carboxyethyl)-5,5'-dichloro-9-ethylthiocarbocyanine chloride; (2) a layer of higher red sensitivity containing addnl. amts. of the same dyes; (3) a magenta filter layer containing bis[3-methyl-1-(p-sulfophenyl)-2-pyrazolin-5-one]trimethinoxonol; (4) a **green-sensitized** emulsion containing Ag(I, Br), anhydro-5,6-dichloro-1,3'-diethyl-3-(3-sulfopropyl)-benzimidazolooxacarbocyanine hydroxide, anhydro-5,5',6,6'-tetrachloro-1,1'-diethyl-3,3'-bis(2-



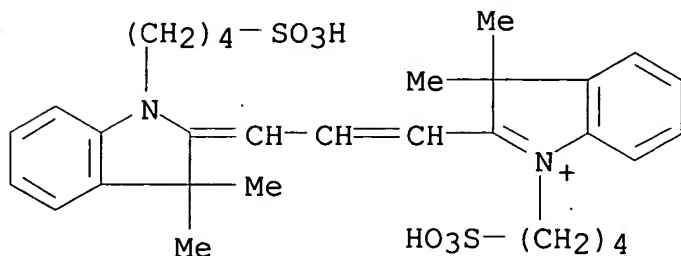
sulfonylethyl)benzimidazolocarbocyanine hydroxide, and 4-[(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)methylethylidene]-(3-methyl-1-(p-sulfophenyl)-2-pyrazolin-5-one); (5) a sensitized layer containing the layer (4) dyes; (6) a yellow filter containing 4-[(3-ethyl-2(3H)-benzoxazolylidene)-ethylidene]-3-methyl-1-(p-sulfophenyl)-2-pyrazolin-5-one monosulfonate; (7) a Ag(I, Br) emulsion containing a yellow color coupler (U.S. 2,875,057); (8) a blue-sensitized Ag(I, Br) emulsion containing the same yellow coupler; and (9) a yellow and uv filter containing 2-[(3-cyano-3-dodecylsulfonyl)-allylidene]-3-(3-sulfopropyl)thiazolidene K salt.

IT **29637-30-7**

(filter dye, for color photographic emulsions)

RN 29637-30-7 HCAPLUS

CN 3H-Indolium, 2-[3-[3,3-dimethyl-1-(4-sulfobutyl)-2-indolinyliidene]propenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, iodide (8CI) (CA INDEX NAME)



● I<sup>-</sup>

IT **1742-90-1 7440-84-8 10049-96-4**

**16470-45-4 19163-98-5 28118-10-7**

**28485-61-2 29597-79-3 29637-04-5**

**29637-05-6 29637-08-9 29637-13-6**

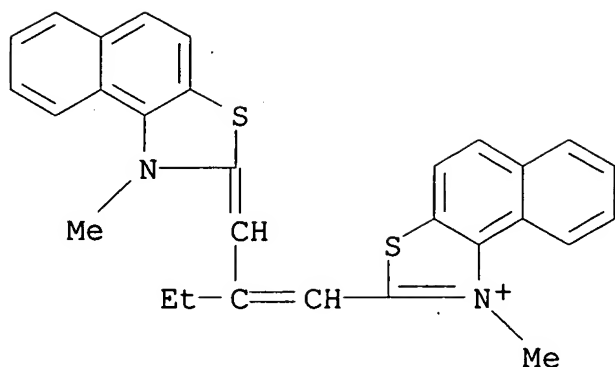
**29637-14-7 29637-17-0 61891-16-5**

**76213-48-4**

(photographic sensitizer, for color photographic emulsions)

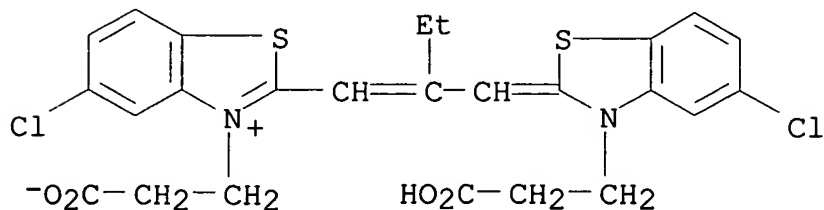
RN 1742-90-1 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-methyl-2-[2-[(1-methylnaphtho[1,2-d]thiazol-2(1H)-ylidene)methyl]-1-butenyl]-, chloride (9CI) (CA INDEX NAME)



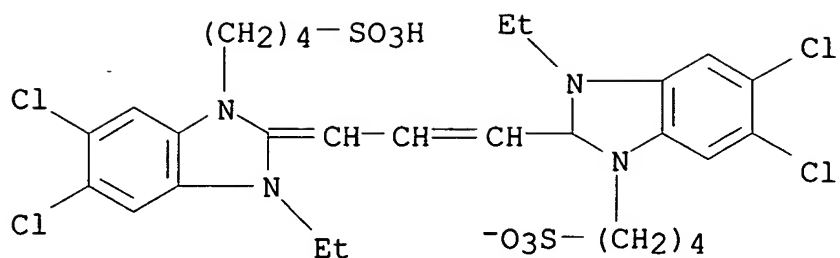
RN 7440-84-8 HCAPLUS

CN Benzothiazolium, 3-(2-carboxyethyl)-2-[2-[[3-(2-carboxyethyl)-5-chloro-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-chloro-, inner salt (9CI) (CA INDEX NAME)



RN 10049-96-4 HCAPLUS

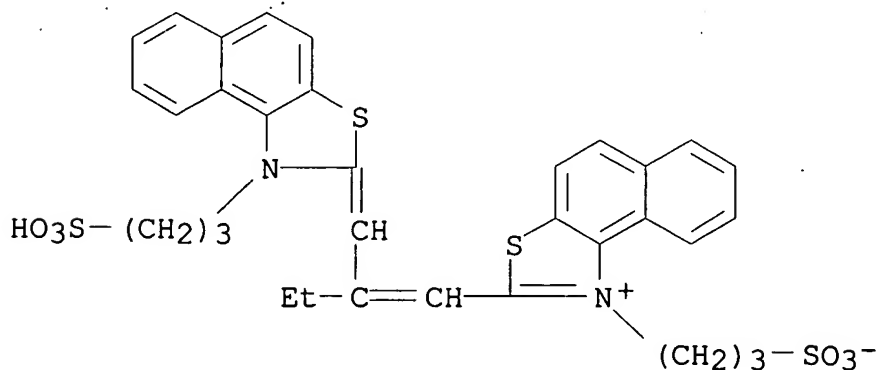
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 16470-45-4 HCAPLUS

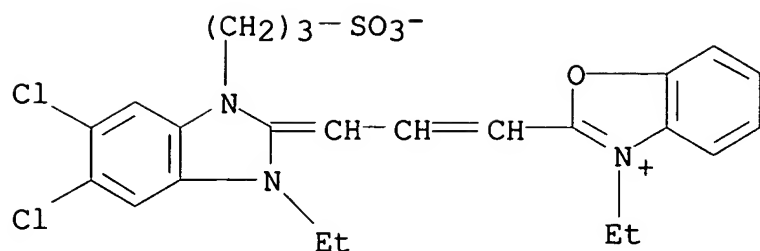
CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[2-[[1-(3-sulfopropyl)naphtho[1,2-d]thiazol-2(1H)-ylidene]methyl]-1-butenyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

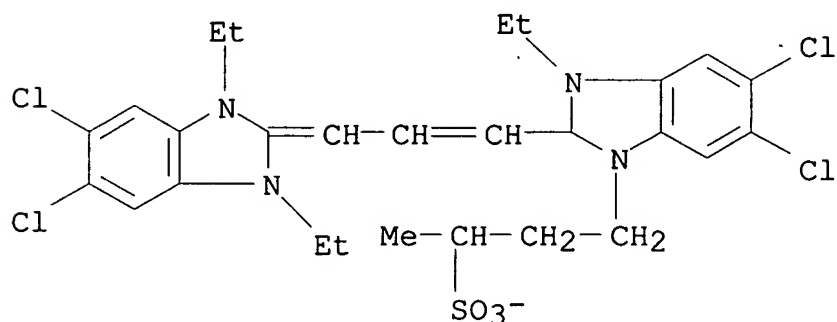
RN 19163-98-5 HCAPLUS

CN Benzoxazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 28118-10-7 HCAPLUS

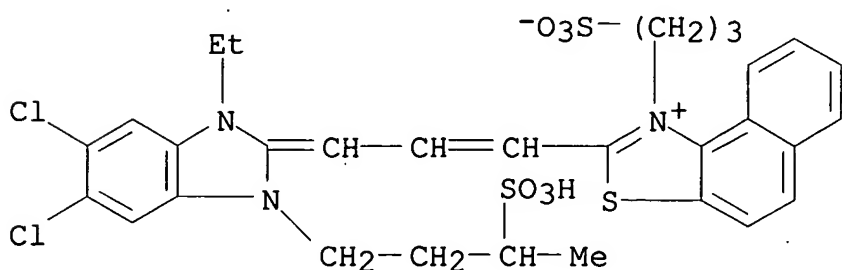
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

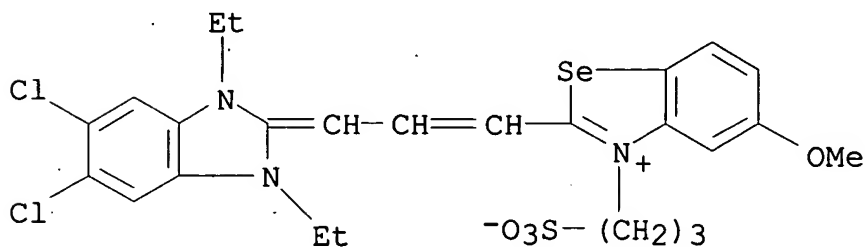
RN 28485-61-2 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



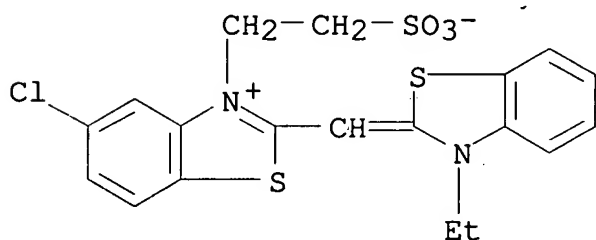
RN 29597-79-3 HCAPLUS

CN Benzoselenazolium, 2-[3-(5,6-dichloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-5-methoxy-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



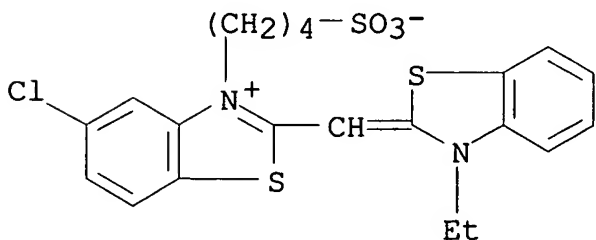
RN 29637-04-5 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



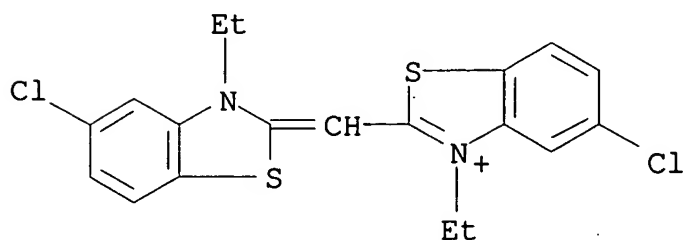
RN 29637-05-6 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



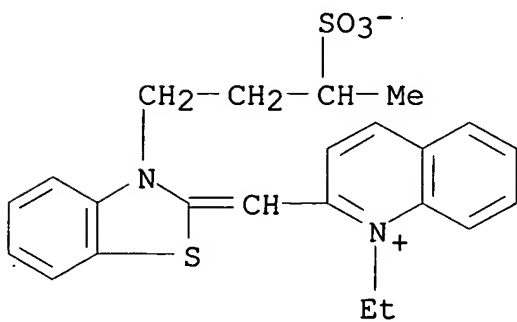
RN 29637-08-9 HCAPLUS

CN Benzothiazolium, 5-chloro-2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-3-ethyl-, iodide (9CI) (CA INDEX NAME)

● I<sup>-</sup>

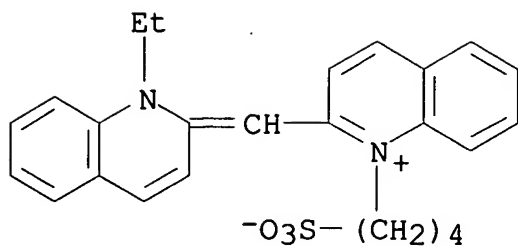
RN 29637-13-6 HCAPLUS

CN Quinolinium, 1-ethyl-2-[[3-(3-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



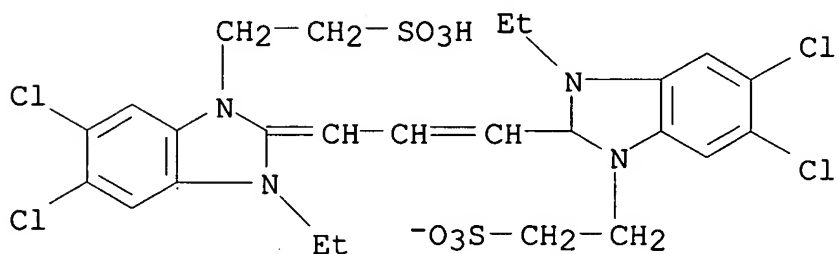
RN 29637-14-7 HCAPLUS

CN Quinolinium, 2-[(1-ethyl-2(1H)-quinolinylidene)methyl]-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 29637-17-0 HCAPLUS

CN Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-3-(2-sulfoethyl)-2-benzimidazolinylydene]propenyl]-1-ethyl-3-(sulfoethyl)-, hydroxide, inner salt, sodium salt (8CI) (CA INDEX NAME)

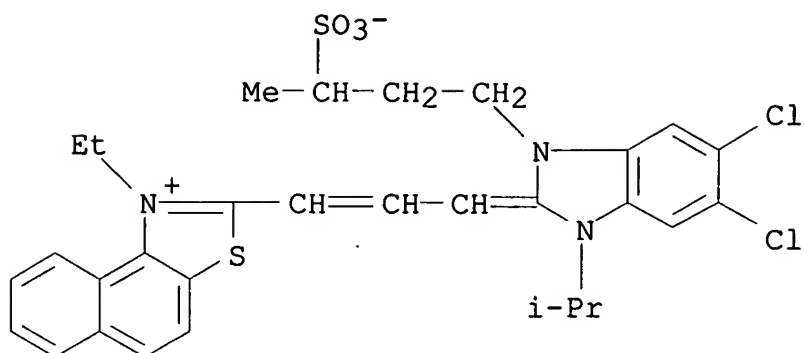


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

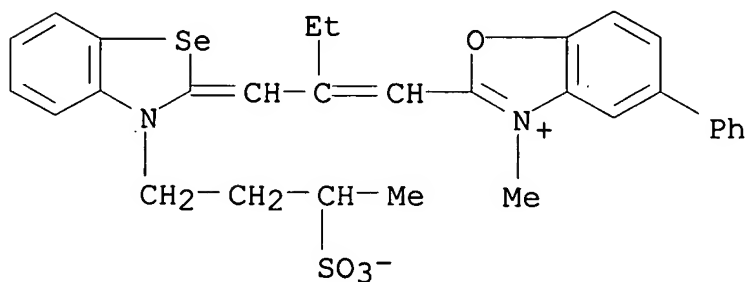
RN 61891-16-5 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-[5,6-dichloro-1,3-dihydro-1-(1-methylethyl)-3-(3-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 76213-48-4 HCAPLUS

CN Benzoxazolium, 3-methyl-5-phenyl-2-[2-[[3-(3-sulfobutyl)-2(3H)-benzoselenazolylidene]methyl]-1-butenyl]-, inner salt (9CI) (CA INDEX NAME)



IC G03C

CC 74 (Radiation Chemistry, **Photochemistry**, and **Photographic Processes**)

IT 27583-41-1 29637-28-3 **29637-30-7** 30908-14-6  
(filter dye, for color photographic emulsions)

IT **1742-90-1** **7440-84-8** 7570-41-4

**10049-96-4** **16470-45-4** **19163-98-5**

21584-13-4 **28118-10-7** **28485-61-2**

**29597-79-3** **29637-04-5** **29637-05-6**

**29637-08-9** 29637-09-0 29637-10-3 29637-11-4

29637-12-5 **29637-13-6** **29637-14-7**

**29637-17-0** 29637-18-1 29680-39-5 **61891-16-5**

**76213-48-4**

(photographic sensitizer, for color photographic emulsions)

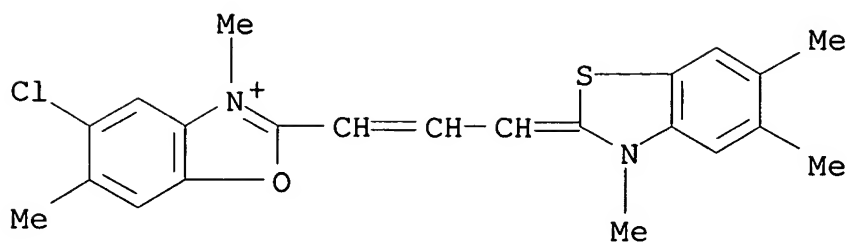


L29 ANSWER 71 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1970:420435 HCAPLUS  
 DOCUMENT NUMBER: 73:20435  
 TITLE: Silver halide emulsions containing  
 5-chloro-6-methylbenzoxazole cyanide and  
 merocyanine sensitizers  
 PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd.  
 SOURCE: Brit., 16 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
GB 1187597		19700408		
DE 1597618			DE	
US 3711288		19730000	US	
PRIORITY APPLN. INFO.:			JP	
				1966
				0728

GI For diagram(s), see printed CA Issue.  
 AB I [R = S, NET, and N(CH<sub>2</sub>)<sub>n</sub>OAc] and II are used in the preparation of  
 black-and-white and also **green-sensitive**  
 photographic emulsions. The amount of I or II used is 10-300  
 mg/mole Ag halide.  
 IT **28794-61-8 28797-62-8 28797-63-9**  
**28797-64-0 28797-65-1 28797-66-2**  
**28797-67-3 28797-69-5 28797-71-9**  
**28797-72-0 28797-73-1 28797-74-2**  
**28797-77-5 28837-26-5 29600-66-6**  
**31858-01-2 31858-02-3 50671-48-2**  
**81128-52-1**  
 (photographic sensitizer)  
 RN 28794-61-8 HCAPLUS  
 CN Benzoxazolium, 5-chloro-3,6-dimethyl-2-[3-(3,5,6-trimethyl-2(3H)-  
 benzothiazolylidene)-1-propenyl]-, salt with 4-  
 methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 47547-78-4

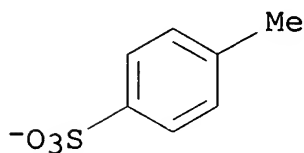
CMF C22 H22 Cl N2 O S



CM 2

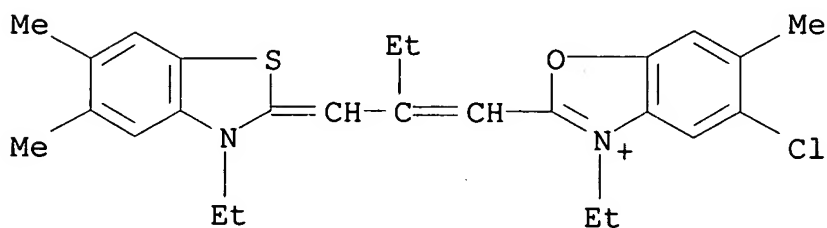
CRN 16722-51-3

CMF C7 H7 O3 S



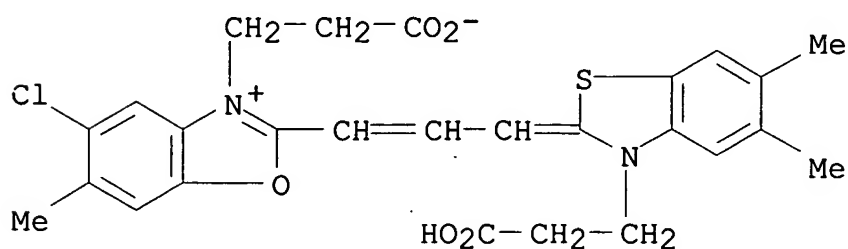
RN 28797-62-8 HCAPLUS

CN Benzoxazolium, 5-chloro-3-ethyl-2-[2-[(3-ethyl-5,6-dimethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-6-methyl-, iodide (9CI)  
(CA INDEX NAME)

● I<sup>-</sup>

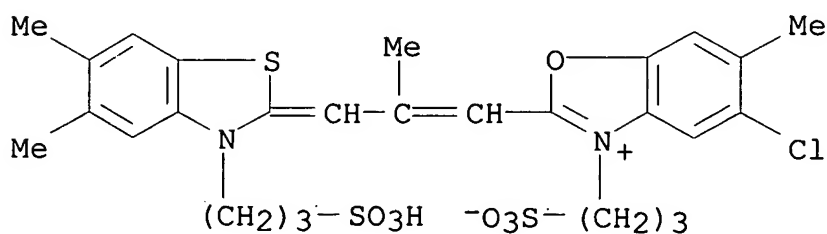
RN 28797-63-9 HCAPLUS

CN Benzoxazolium, 3-(2-carboxyethyl)-2-[3-[3-(2-carboxyethyl)-5,6-dimethyl-2(3H)-benzothiazolylidene]-1-propenyl]-5-chloro-6-methyl-, inner salt (9CI) (CA INDEX NAME)



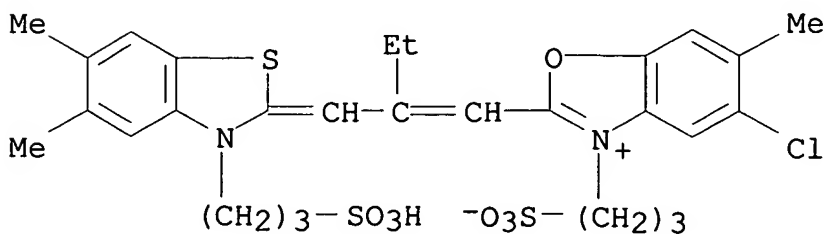
RN 28797-64-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dimethyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



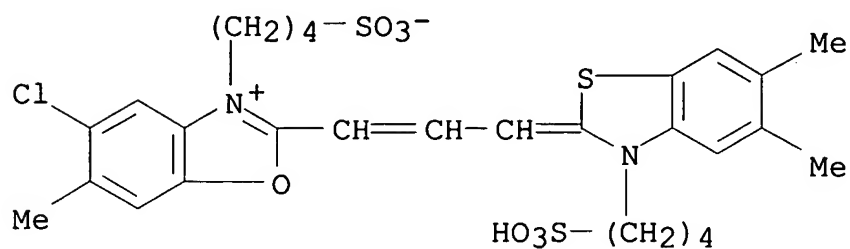
RN 28797-65-1 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5,6-dimethyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



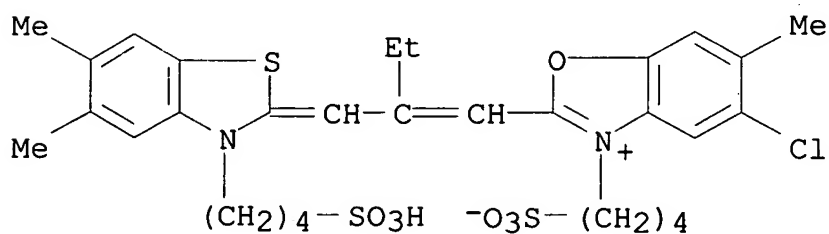
RN 28797-66-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1-propenyl]-6-methyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



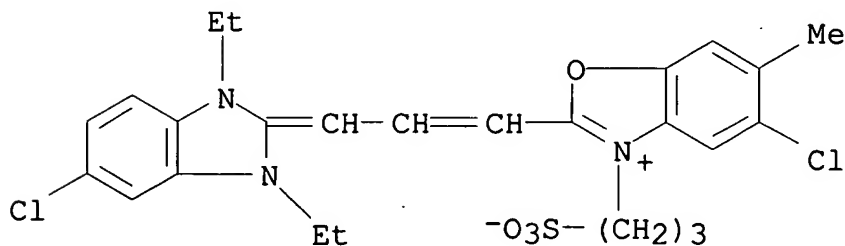
RN 28797-67-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[2-[[5,6-dimethyl-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-6-methyl-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



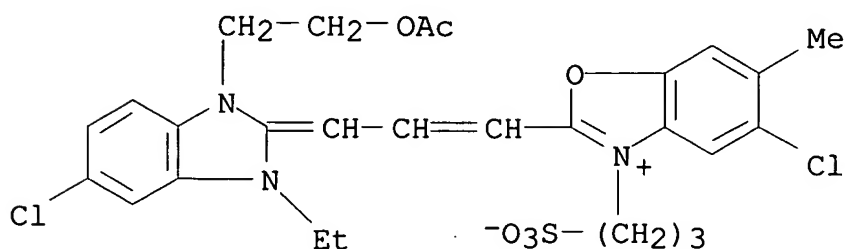
RN 28797-69-5 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-(5-chloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



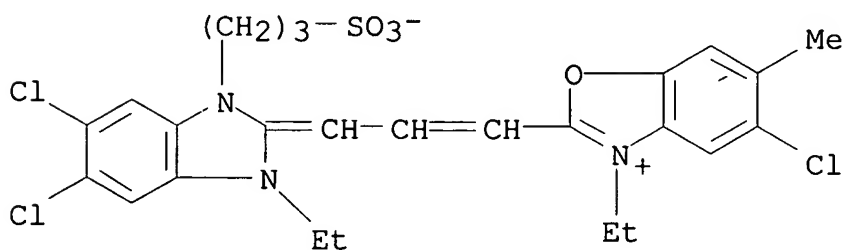
RN 28797-71-9 HCAPLUS

CN Benzoxazolium, 2-[3-[1-[2-(acetyloxy)ethyl]-5-chloro-3-ethyl-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-5-chloro-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



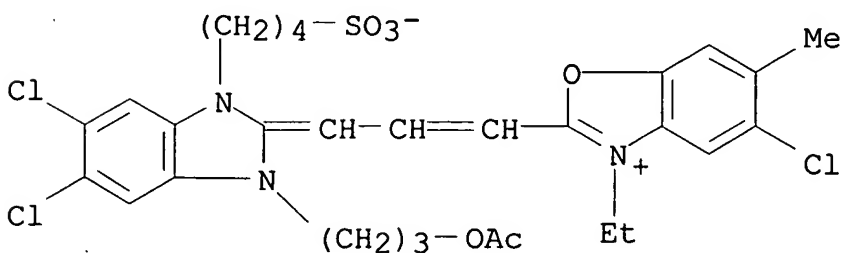
RN 28797-72-0 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME)



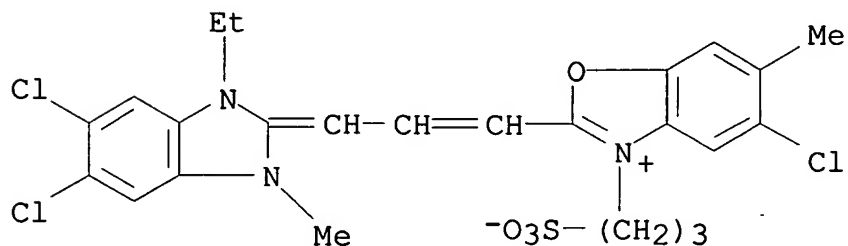
RN 28797-73-1 HCAPLUS

CN Benzoxazolium, 2-[3-[1-[3-(acetyloxy)propyl]-5,6-dichloro-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-chloro-3-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME).



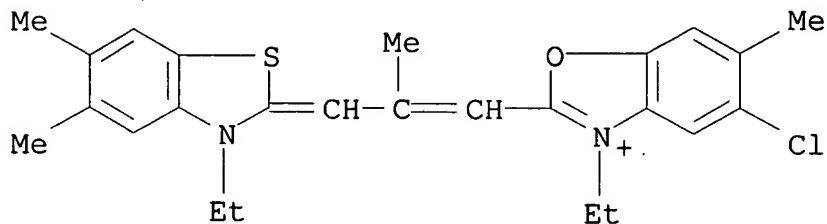
RN 28797-74-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-(5,6-dichloro-1-ethyl-1,3-dihydro-3-methyl-2H-benzimidazol-2-ylidene)-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 28797-77-5 HCAPLUS

CN Benzoxazolium, 5-chloro-3-ethyl-2-[3-(3-ethyl-5,6-dimethyl-2(3H)-benzothiazolylidene)-2-methyl-1-propenyl]-6-methyl-, iodide (9CI) (CA INDEX NAME)



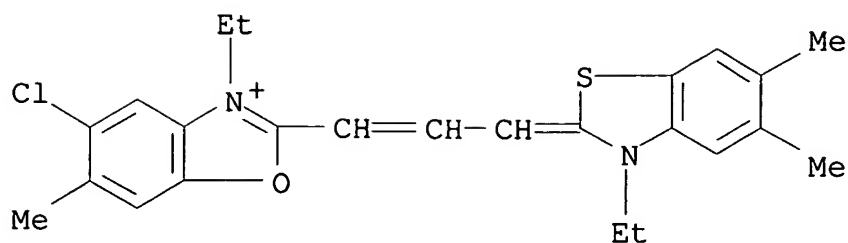
RN 28837-26-5 HCAPLUS

CN Benzoxazolium, 5-chloro-3-ethyl-2-[3-(3-ethyl-5,6-dimethyl-2(3H)-benzothiazolylidene)-1-propenyl]-6-methyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47627-56-5

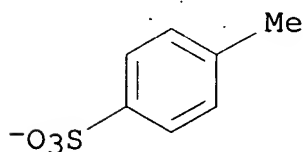
CMF C24 H26 Cl N2 O S



CM 2

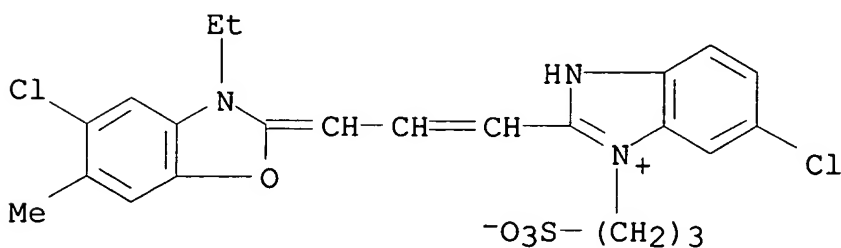
CRN 16722-51-3

CMF C7 H7 O3 S



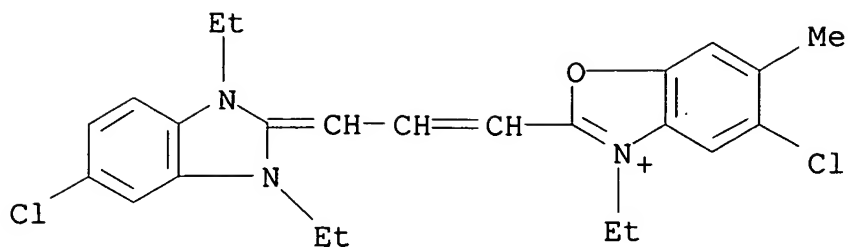
RN 29600-66-6 HCAPLUS

CN Benzimidazolium, 5-chloro-2-[3-[5-chloro-3-ethyl-6-methyl-2-benzoxazolinyliidene]propenyl]-3-(3-sulfopropyl)- (8CI) (CA INDEX NAME)



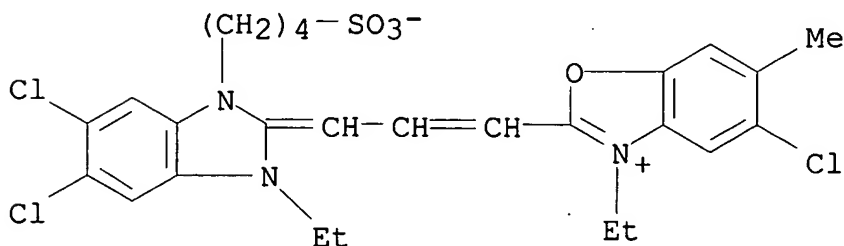
RN 31858-01-2 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-(5-chloro-1,3-diethyl-1,3-dihydro-2H-benzimidazol-2-ylidene)-1-propenyl]-3-ethyl-6-methyl-, iodide (9CI) (CA INDEX NAME)



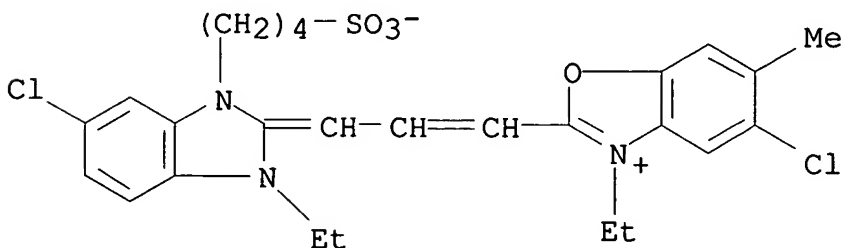
RN 31858-02-3 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME)



RN 50671-48-2 HCAPLUS

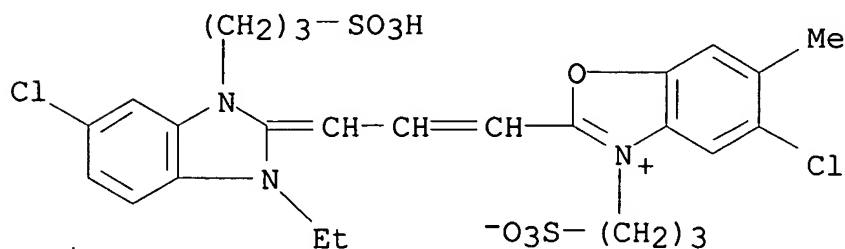
CN Benzoxazolium, 5-chloro-2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME)



RN 81128-52-1 HCAPLUS



CN Benzoxazolium, 5-chloro-2-[3-[5-chloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

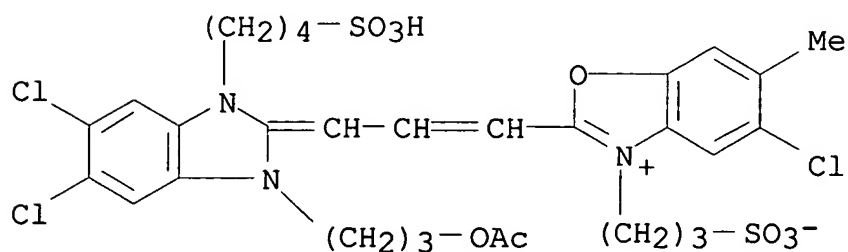


IT 28797-75-3 28797-76-4 28797-77-5  
28797-78-6

(photographic sensitizers)

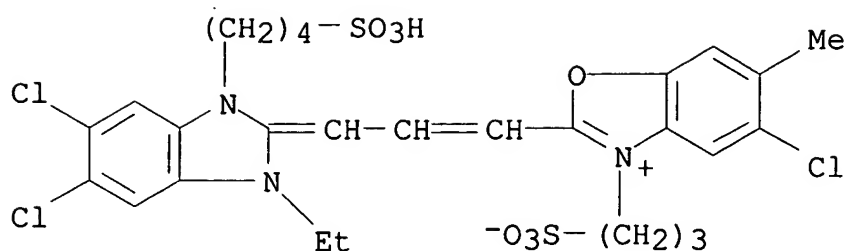
RN 28797-75-3 HCAPLUS

CN Benzoxazolium, 2-[3-[1-[3-(acetyloxy)propyl]-5,6-dichloro-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-5-chloro-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



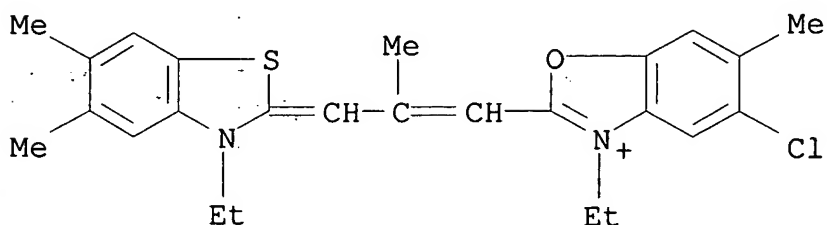
RN 28797-76-4 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(4-sulfobutyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-6-methyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



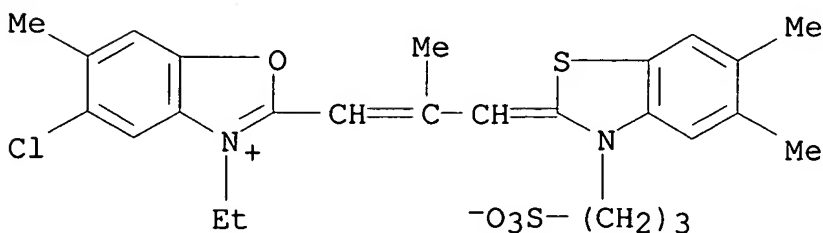
RN 28797-77-5 HCAPLUS

CN Benzoxazolium, 5-chloro-3-ethyl-2-[3-(3-ethyl-5,6-dimethyl-2(3H)-benzothiazolylidene)-2-methyl-1-propenyl]-6-methyl-, iodide (9CI)  
(CA INDEX NAME)

● I<sup>-</sup>

RN 28797-78-6 HCAPLUS

CN Benzoxazolium, 5-chloro-2-[3-[5,6-dimethyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-ethyl-6-methyl-, inner salt (9CI) (CA INDEX NAME)



IC C09B

USHA SHRESTHA

REM 4B28

CC 74 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** Processes)  
ST cyanines benzoxazoles sensitizers; benzoxazoles cyanines  
sensitizers; sensitizers cyanines benzoxazoles; merocyanines  
benzoxazoles sensitizers; emulsions sensitizers; **green**  
**sensitive** emulsions  
IT 28794-61-8 28797-62-8 28797-63-9  
28797-64-0 28797-65-1 28797-66-2  
28797-67-3 28797-69-5 28797-71-9  
28797-72-0 28797-73-1 28797-74-2  
28797-77-5 28837-26-5 29600-66-6  
31858-01-2 31858-02-3 50671-48-2  
81128-52-1  
(photographic sensitizer)  
IT 28797-75-3 28797-76-4 28797-77-5  
28797-78-6 28797-79-7 28797-80-0  
(photographic sensitizers)

L29 ANSWER 72 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1970:61400 HCAPLUS  
DOCUMENT NUMBER: 72:61400  
TITLE: Silver halide photographic emulsions  
containing carbocyanine dyes  
INVENTOR(S): Shiba, Keisuke; Sato, Akira  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd.  
SOURCE: Fr., 12 pp.  
CODEN: FRXXAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
FR 1572879		19690627		
DE 1772849			DE	
GB 1196995			GB	
US 3628964		19710000	US	
PRIORITY APPLN. INFO.:			JP	
				1967
				0717

GI For diagram(s), see printed CA Issue.  
AB Photographic emulsions with improved **green**

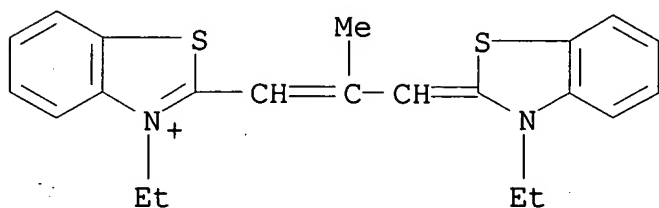
**sensitivity** contain a carbocyanine dye. Thus, a solution of 2.5 g 2-( $\beta$ -anilino vinyl)-1,3,3,5-tetramethyl-3H)indolium iodide and 2 g 5,6-dichloro-1-ethyl-2-methyl-3-(3-sulfopropyl)benzimidazolium hydroxide inner salt in 40 ml PhNO<sub>2</sub> and 3 ml Ac<sub>2</sub>O<sub>2</sub> was refluxed 5 min in the presence of 2.5 ml Et<sub>3</sub>N, and cooled to give a dye I, m. 226°, with  $\lambda_{\max}$  508 nm (MeOH). To 100 g of Ag iodobromide emulsion, 4 ml I and 4 ml II in MeOH were added, the emulsion kept 10 min at 37°, coated on a glass plate, dried, exposed to light of 5400°K, the photosensitive layer exposed in the presence of yellow, red, or no filters, developed for 10 min at 20° in a composition containing anhydrous Na<sub>2</sub>SO<sub>3</sub> 100, Metol 2, hydroquinone 5, borax 2, and H<sub>2</sub>O to 1000 g, the developed layer treated with a fixing bath, and the sensitivity measured in the green (500-600 nm) region. Emulsions containing both I and II had improved sensitivity in the green region.

IT 1745-32-0 7310-87-4 18426-56-7  
 28272-52-8 28272-53-9 28272-54-0  
 28279-05-2 28279-06-3 28279-08-5  
 28413-70-9 28413-71-0 28512-65-4

(photographic sensitizer)

RN 1745-32-0 HCAPLUS

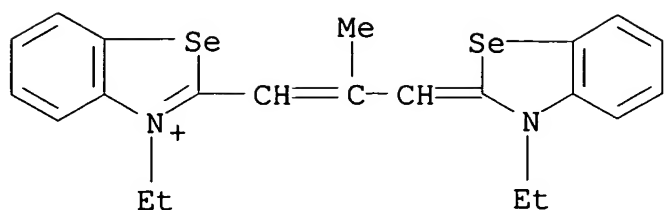
CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylidene)-2-methyl-1-propenyl]-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 7310-87-4 HCAPLUS

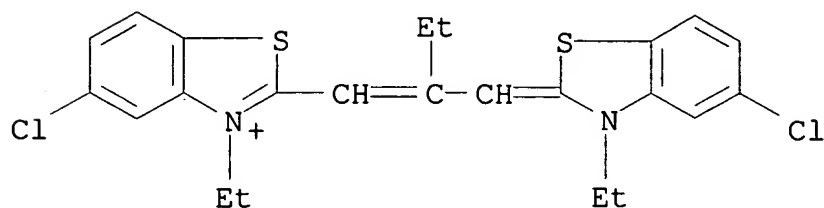
CN Benzoselenazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-2-methyl-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 18426-56-7 HCAPLUS

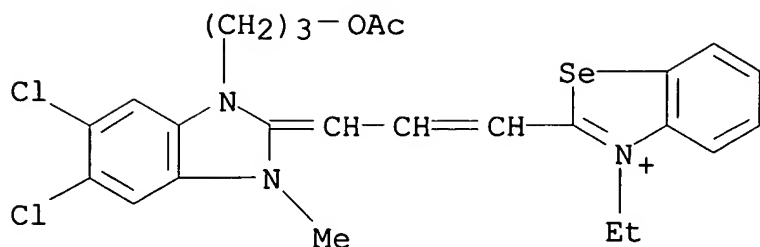
CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-3-ethyl-, bromide (9CI)  
(CA INDEX NAME)



● Br<sup>-</sup>

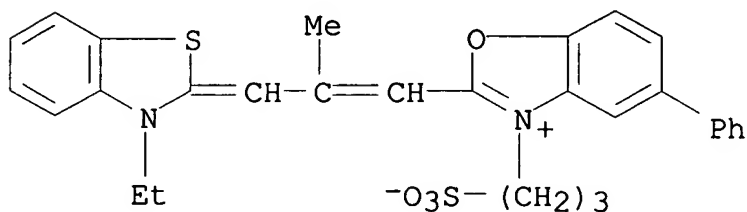
RN 28272-52-8 HCAPLUS

CN Benzoselenazolium, 2-[3-[1-[3-(acetyloxy)propyl]-5,6-dichloro-1,3-dihydro-3-methyl-2H-benzimidazol-2-ylidene]-1-propenyl]-3-ethyl-  
(9CI) (CA INDEX NAME)



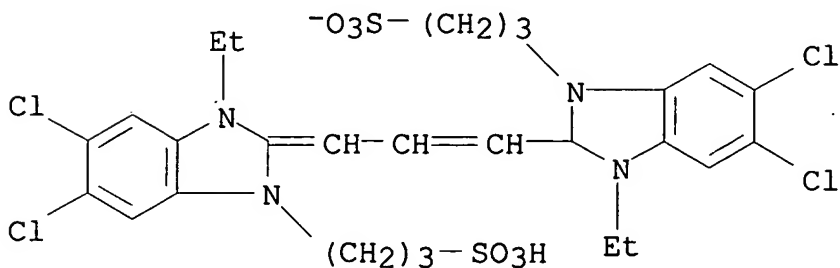
RN 28272-53-9 HCAPLUS

CN Benzoxazolium, 2-[3-(3-ethyl-2-benzothiazolinyldiene)-2-methylpropenyl]-5-phenyl-3-(3-sulfopropyl)-, hydroxide, inner salt (8CI) (CA INDEX NAME)



RN 28272-54-0 HCAPLUS

CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-[5,6-dichloro-1-ethyl-1,3-dihydro-3-(3-sulfopropyl)-2H-benzimidazol-2-ylidene]-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

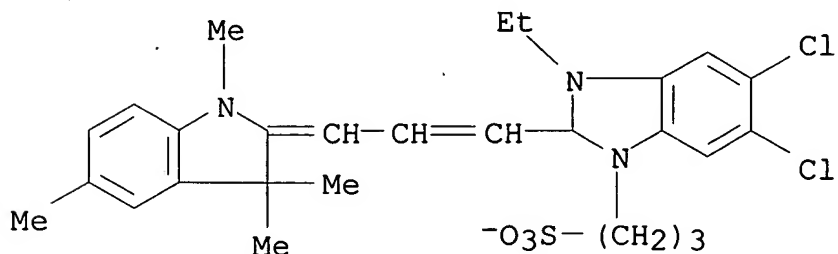


● Na

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28279-05-2 HCAPLUS

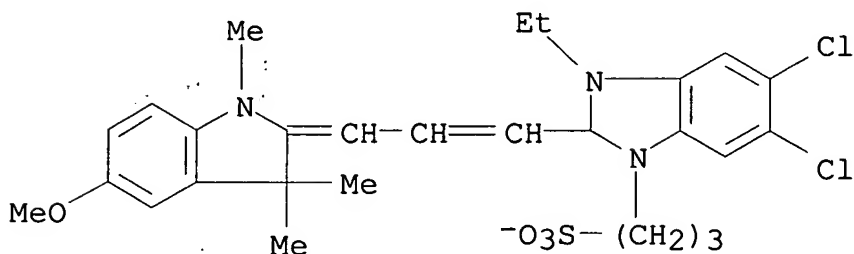
CN 1H-Benzimidazolium, 5,6-dichloro-2-[3-(1,3-dihydro-1,3,3,5-tetramethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28279-06-3 HCAPLUS

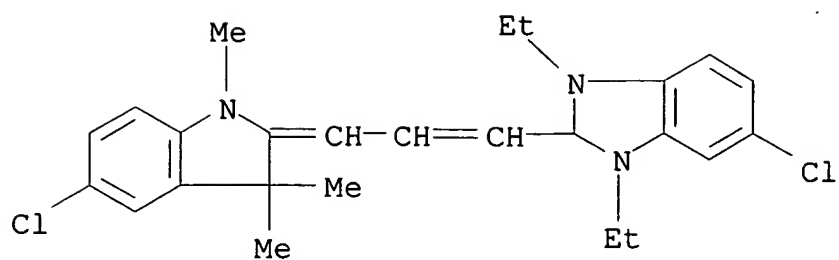
CN Benzimidazolium, 5,6-dichloro-1-ethyl-2-[3-(5-methoxy-1,3,3-trimethyl-2-indolinyliidene)propenyl]-3-(3-sulfopropyl)-, hydroxide, inner salt (8CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28279-08-5 HCAPLUS

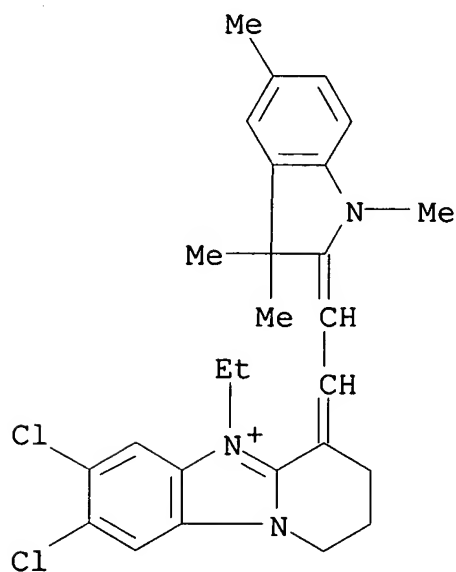
CN Benzimidazolium, 5-chloro-2-[3-(5-chloro-1,3,3-trimethyl-2-indolinyliidene)propenyl]-1,3-diethyl-, bromide (8CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 28413-70-9 HCAPLUS

CN Pyrido[1,2-a]benzimidazolium, 7,8-dichloro-5-ethyl-1,2,3,4-tetrahydro-4-[2-(1,3,3,5-tetramethyl-2-indolinylidene)ethylidene]-, iodide (8CI) (CA INDEX NAME)

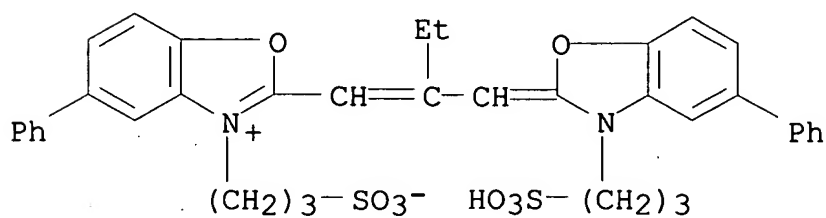




RN 28413-71-0 HCAPLUS  
 CN Benzoxazolium, 5-phenyl-2-[2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

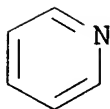
CM 1

CRN 29133-39-9  
 CMF C37 H36 N2 O8 S2

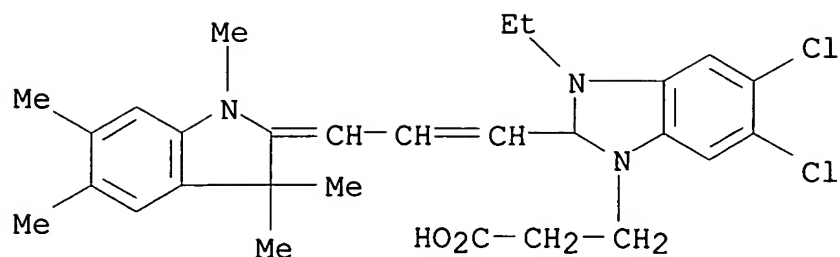


CM 2

CRN 110-86-1  
 CMF C5 H5 N



RN 28512-65-4 HCAPLUS  
 CN Benzimidazolium, 1-(2-carboxyethyl)-5,6-dichloro-3-ethyl-2-[3-(1,3,3,5,6-pentamethyl-2-indolinylidene)propenyl]-, bromide (8CI) (CA INDEX NAME)



● Br<sup>-</sup>

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IC G03C

CC 74 (Radiation Chemistry, **Photochemistry**, and **Photographic** Processes)

ST silver halide color photog; color photog **green sensitizers**; **green sensitizers** color photog; emulsions **green sensitizers**; carbocyanines color photog; selenazole benzo dyes; benzoselenazole dyes

IT **1745-32-0 7310-87-4 18426-56-7**  
**28272-52-8 28272-53-9 28272-54-0**  
**28279-05-2 28279-06-3 28279-08-5**  
**28413-70-9 28413-71-0 28512-65-4**  
 (photographic sensitizer)

L29 ANSWER 73 OF 73 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1966:72618 HCAPLUS

DOCUMENT NUMBER: 64:72618

ORIGINAL REFERENCE NO.: 64:13604a-d

TITLE: Supersensitization of photographic silver halide emulsions

PATENT ASSIGNEE(S): Ilford Ltd.

SOURCE: 15 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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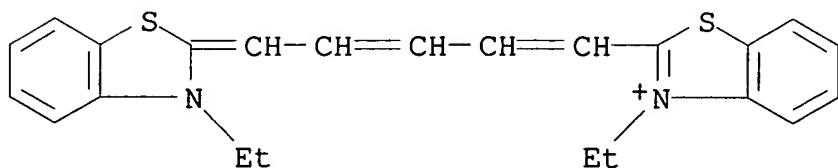
USHA SHRESTHA REM 4B28

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 NL 6504708  
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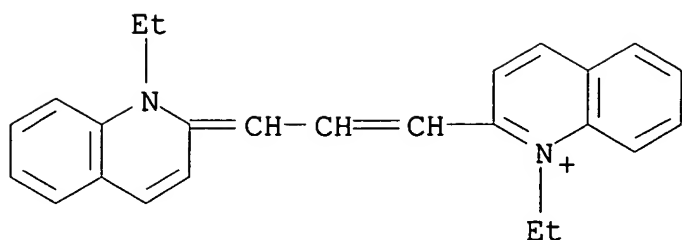
19651021 NL  
 GB

1964  
 0420

- GI For diagram(s), see printed CA Issue.
- AB Photog. Ag halide emulsions sensitized with red sensitizers of the general formula I are supersensitized for red by the addnl. incorporation of **green sensitizers** of the general formula II. In formula I, X and Y are the same or different and are S, Se, CH:CH, or and alkyl(aryl)-amino group, R1 and R3 are the same or different and are alkyl, carbalkoxy, carbamoyl alkyl, or sulfo alkyl groups, R2 is H or a lower alkyl group, R5, R6, R9, R10 are the same or different and are H, halogen, alkyl, aryl, alkoxy, or CF3 groups, R4 and R8 are the same or different and are H or are together with R5 and R9, resp., part of a benzene ring, and R7 and R11 without or together with R6 and R10 have the same meaning; in formula II, R4, R5, R6, R7, R8, R9, R10, and R11 have the same meaning as in formula I, R13 and R14 are lower alkyl groups, R16 is H or an alkyl, aralkyl, or aryl group, A is O or a substituted amino group, and U and V are O and (or) S.
- IT **7187-55-5**, Benzothiazolium, 3-ethyl-2-[5-(3-ethyl-2-benzothiazolinyldene)-1,3-pentadienyl]- **20187-38-6**, Quinolinium, 1-ethyl-2-[3-(1-ethyl-2(1H)-quinolinyldene)propenyl]- **24690-67-3**, Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2-benzothiazolinyldene)methyl]-1-butenyl]-3-ethyl- (photog. supersensitization by)
- RN 7187-55-5 HCAPLUS
- CN Benzothiazolium, 3-ethyl-2-[5-(3-ethyl-2(3H)-benzothiazolyldene)-1,3-pentadienyl]- (9CI) (CA INDEX NAME)

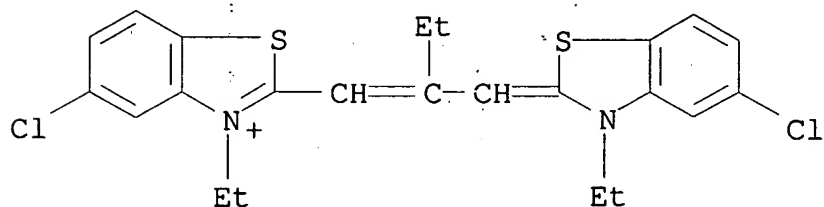


- RN 20187-38-6 HCAPLUS
- CN Quinolinium, 1-ethyl-2-[3-(1-ethyl-2(1H)-quinolinyldene)-1-propenyl]- (9CI) (CA INDEX NAME)



RN 24690-67-3 HCAPLUS

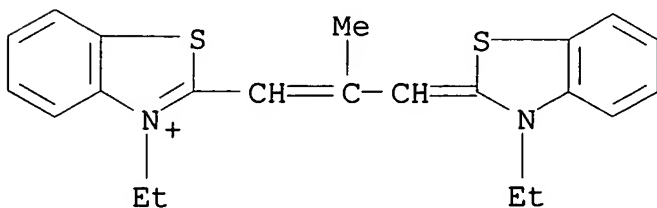
CN Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2(3H)-benzothiazolylydene)methyl]-1-butenyl]-3-ethyl- (9CI) (CA INDEX NAME)



IT 1745-32-0, Cyanine I  
(preparation of)

RN 1745-32-0 HCAPLUS

CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylydene)-2-methyl-1-propenyl]-, bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

IC G03C

USHA SHRESTHA

REM 4B28

- CC 11 (Radiation Chemistry and **Photochemistry**)  
IT **7187-55-5**, Benzothiazolium, 3-ethyl-2-[5-(3-ethyl-2-benzothiazolinylydene)-1,3-pentadienyl]- **20187-38-6**,  
Quinolinium, 1-ethyl-2-[3-(1-ethyl-2(1H)-quinolylydene)propenyl]-  
**24690-67-3**, Benzothiazolium, 5-chloro-2-[2-[(5-chloro-3-ethyl-2-benzothiazolinylydene)methyl]-1-butenyl]-3-ethyl-  
(photog. supersensitization by)  
IT **1745-32-0**, Cyanine I  
(preparation of)